

# RAILROAD GAZETTE

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now the sole proprietors of three several United  
States Patents granted to them for such improve-  
ments, as well as of a patent granted to John Im-  
ray for further improvements; which patents are  
of number and date as follows, viz.:  
United States Patent No. 60,878 August 11, 1868,  
" " 191,788 October 1, 1872,  
" " 192,416 " 23, 1872,  
" " 169,811 Nov. 9, 1875, and  
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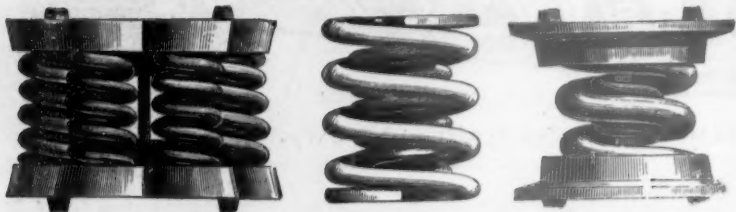
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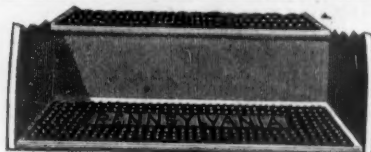
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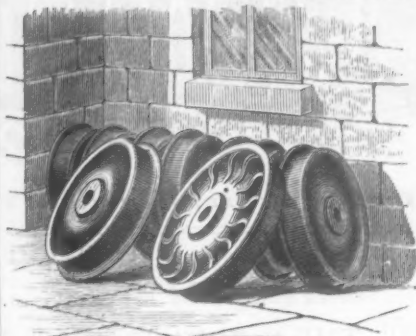
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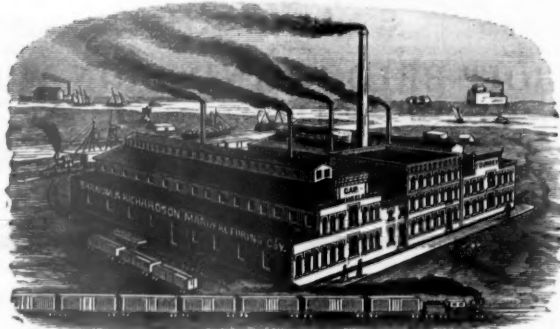


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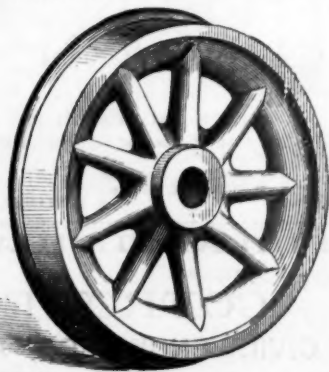
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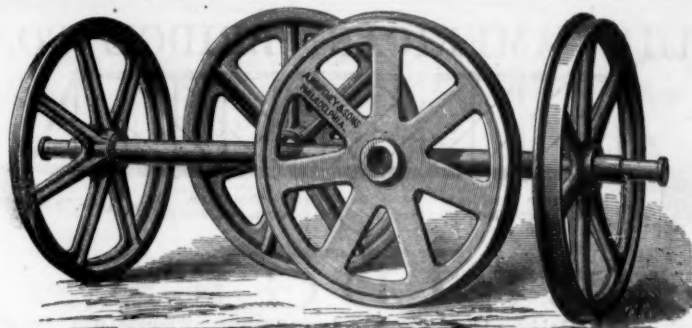
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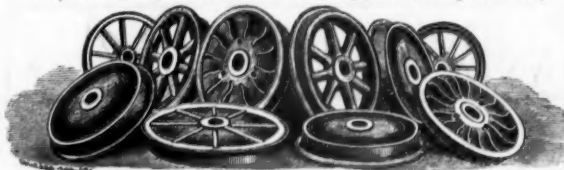
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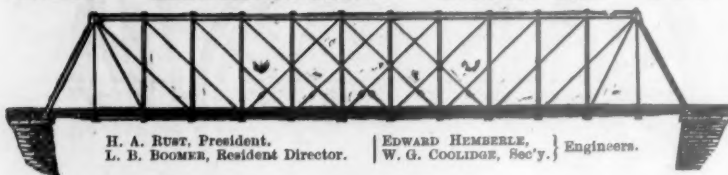


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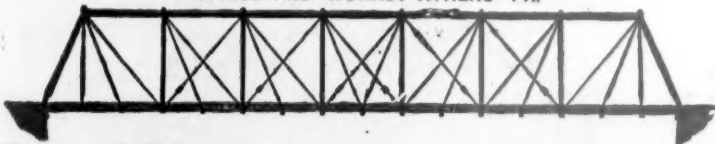
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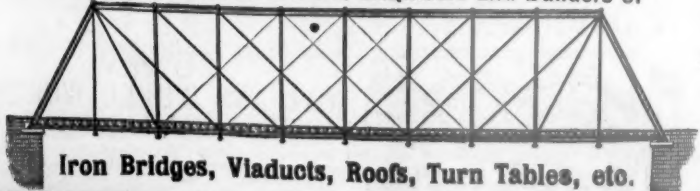
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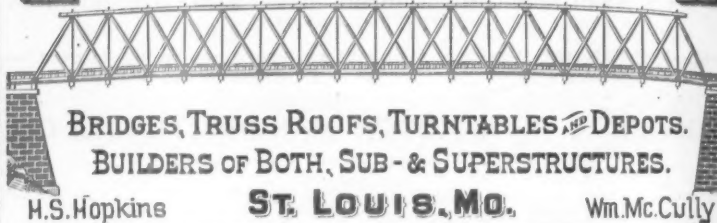
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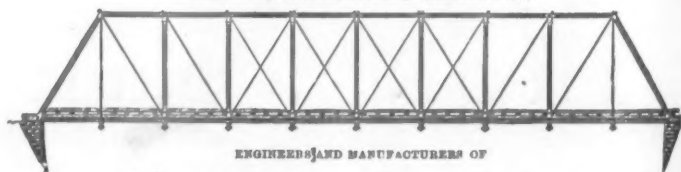
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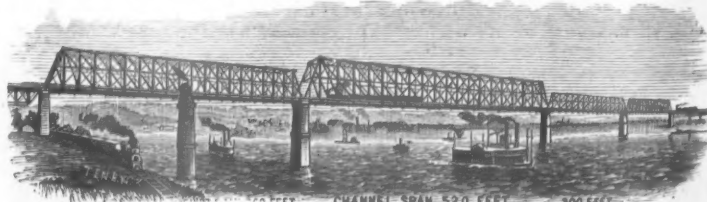
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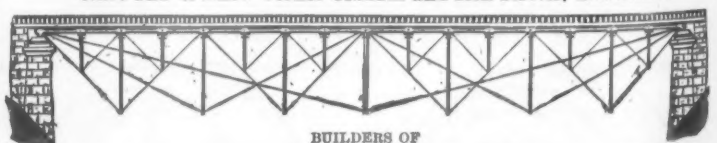
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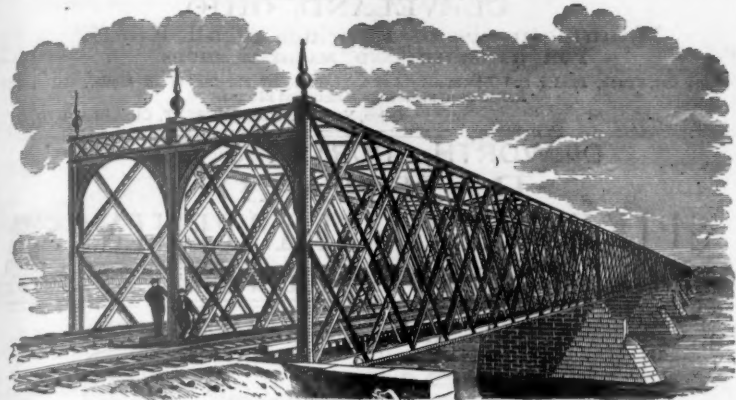
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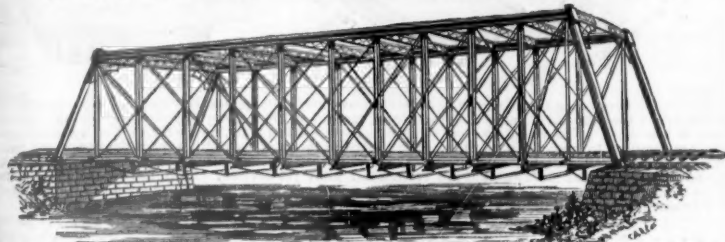


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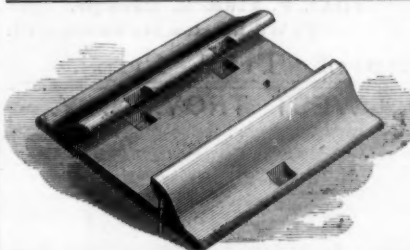
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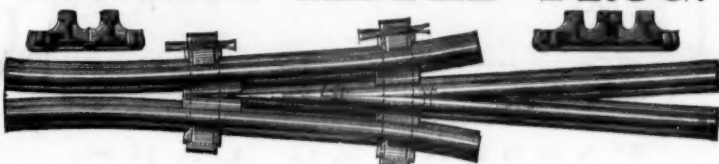
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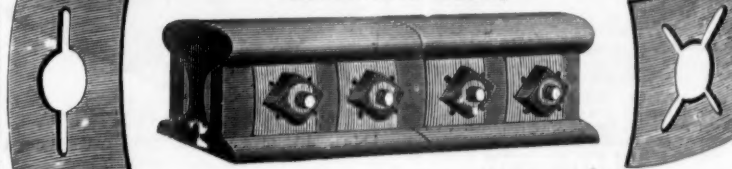
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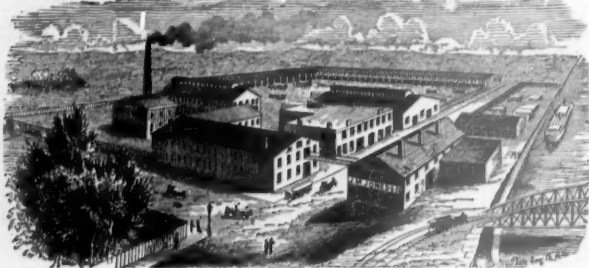
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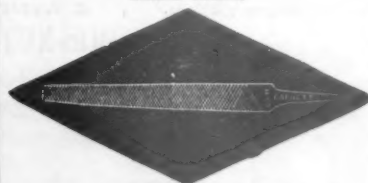
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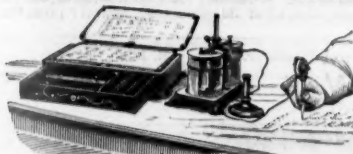
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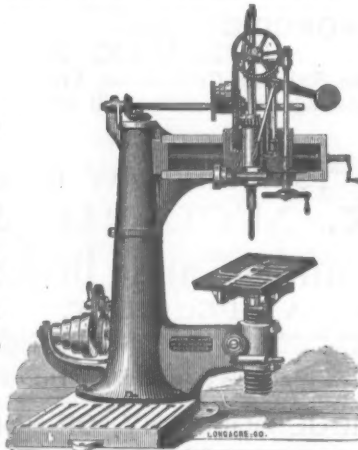
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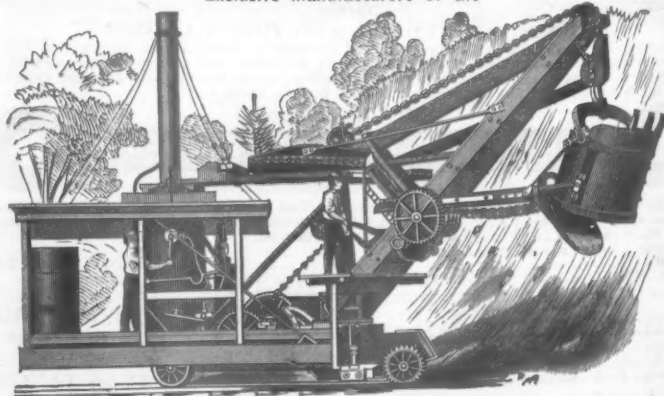
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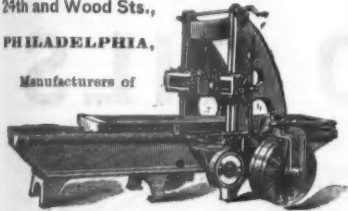
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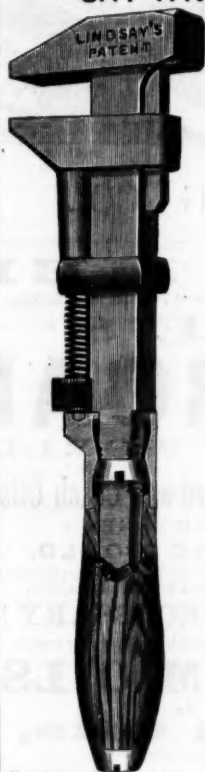
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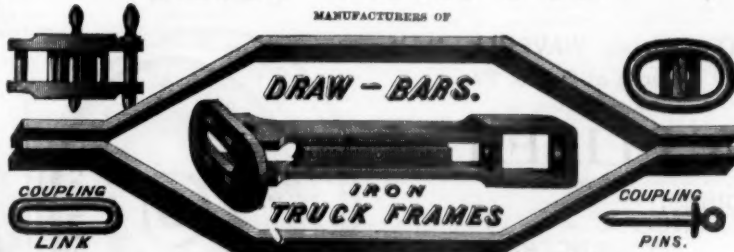
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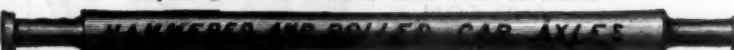
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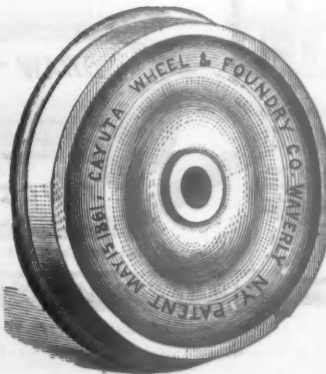
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FRIDAY, JUNE 15, 1877.

### The Brotherhood of Locomotive Engineers as Described by its Chief.

On the evening of April 26, Mr. P. M. Arthur, the chief executive officer of this organization (with the title "Grand Chief Engineer," delivered an address in Case Hall, Cleveland, purporting to give an account of the origin and history of the organization, and especially of the circumstances attending all the strikes in which it has been engaged, and the method of proceeding in declaring a strike.

The society was organized as the "Brotherhood of the Foot-board," at the instance of a few engineers at Marshall, Mich., who met in April, 1863, who called a meeting of Michigan Central, Michigan Southern and Grand Trunk engineers at Detroit, where the constitution was framed and the first "division" established. The membership is now about 11,000, and the number of "divisions" 189. The name was changed to its present form at a convention in Indianapolis in 1864; the publication of the monthly *Journal*, the official organ of the Brotherhood, authorized at the Boston convention in 1866 and begun in January, 1867. Mr. Arthur says:

"In this journal will be found a list of all our sub-divisions, and a list of all the expulsions. Every member that we expel for unbecoming conduct is published in this journal, so that a railroad manager who takes the pains to read this journal (and we furnish it to most of them), can ascertain at a glance, when an engineer applies for a situation, whether he is a worthy man or not. Until we had difficulty with railway companies we found it to be of great service to us and to them; and every manager who is desirous of having in his employ good, sober men, will be very careful to read the list of expulsions found in this journal, and when an engineer applies for a situation, if his name is found in that list, the railway officer, of course, knows the character of the man."

An examination of this list in the June number of the *Journal* shows that out of 27 expulsions, 17 were "for running in a strike," 16 "for non-payment of dues," and the other four, respectively, "for seducing a girl 15 years of age," "for deserting his family," "for violation of his obligation," and "for using unbecoming language." This would hardly be of much service in helping an officer to know whether the men are fit to be employed.

The Insurance Association was formed in December, 1867. It has paid to the heirs of deceased members nearly \$1,000,000, and about \$50,000 has been expended for relief purposes. Mr. Arthur claims that in many cases the Brotherhood has reclaimed engineers from drunken and other immoral habits, and made them good and trustworthy engineers.

The following is the chief part of Mr. Arthur's address:

Now, you say, if those are your aims and purposes, why is it that you have resorted to strikes? Why is it you stop the trains on the road between stations, causing so much inconvenience to the traveling public? Before we go into these strikes, let me explain: In our constitution and by-laws, and we are ready to give them to any man to read if he will call at our office, we have a rule laid down for the government of our members, and that rule is, that in order to prevent any difficulty between the engineers and the companies, it shall be the imperative duty of the Standing Committee upon the road or roads where trouble is likely to arise, to exhaust their own efforts before sending for the Grand Chief Engineer of the organization. It is his duty when he receives such a notice, to give that his preference over all other business.

In compliance with this rule, during the past three years, and up to the strike upon the Central Railroad of New Jersey, we were called upon to assist in the settlement of cases upon thirteen different roads. The Houston & Texas Central, St. Louis, Chicago & New Orleans, St. Louis & Southeastern, St. Joseph, Kansas City & Council Bluffs, Baltimore & Ohio, Buffalo, New York & Philadelphia, Illinois Central, Indianapolis, Bloomington & Western, Ohio & Mississippi, St. Louis, Vandalia & Terre Haute, Grand Trunk, in March, 1875, Atlantic & Great Western, Atchison, Topeka & Santa Fe, and Nashville & Chattanooga.

In each one of these cases, my friends, the officers of the road received us cordially, treated us kindly, and the result was a peaceable adjustment of each case. Concessions were made upon both sides with but one exception, and that was the Atlantic & Great Western; and Mr. Devereux, when he came to understand the case, did not ask us to make any concession. Now, certainly that is evidence enough to convince every fair-minded man, that we, as an organization, are not in favor of strikes, but that we are opposed to strikes, and will go further than many railway officers will to prevent them.

#### THE NEW JERSEY CENTRAL STRIKE.

Now, how came we to have a strike upon the Central Railway of New Jersey, last October? I will tell you. There are many things connected with railway management and the workings of railroads, those not connected with them do not understand. On the Central Railroad of New Jersey they had a system of paying their engineers just as they pleased. The passenger engineers upon that road were running from 130 to 190 miles for a day's work, and receiving \$3.75 for it. Now, upon the majority of roads in this country one hundred miles is considered a day's work, and for that the engineer receives from \$3.10 to \$3.50. Here, those engineers were doing nearly twice the work and receiving but from twenty-five to forty-five cents a day more than was paid on other roads for one hundred miles. On the first day of August an order was issued reducing the wages 10 per cent. The engineers, through their committee, remonstrated against it. Mr. Ricker, then Superintendent, promised them that if they would return to their homes he would do all in his power to prevent their wages from being reduced, but if the Board insisted upon it he would notify the Committee and they could plead their own case. They returned to their homes. There was no general reduction made, but what did they do? An order was issued to the master mechanics at the different points on the line of the road, and they gave a verbal order to A, B and C, engineers, reducing them on certain trains from twenty-five to fifty cents a day, and in other cases added from forty to fifty miles additional run without any additional compensation. The engineers made up their minds while they did not issue a general order, they were going to take them, a few at a time. A committee came together and we were telegraphed for. In obedience to the telegram we went to Phillipsburg, met the Committee, and listened to their grievances. We then addressed a very courteous letter to Mr. Ricker, the Superintendent, and went with the Committee to Elizabeth, the headquarters of the company. Brother Phillips,

Chairman of the Committee, passed into the office of Mr. Ricker and handed him this letter. Now, what was this letter? Was there anything ungentlemanly about it? I will repeat it:

"Col. Ricker, General Superintendent of the Central Railroad, of New Jersey:

"DEAR SIR: The laws and rules of the Brotherhood of Locomotive Engineers, to which your engineers belong, require them, when a question arises between them and their employers that they cannot settle satisfactorily, to send for the Grand Chief Engineer of the organization. It is his duty to go and use all honorable means in his power to prevent a rupture occurring between the engineers and the company. Your engineers have sent for me. I have come, not in any spirit of coercion or dictation, but as a mediator, and would be pleased to have an interview with you and the committee of your engineers. If you will be kind enough to grant the favor please inform the bearer of the time and place."

Could any gentleman take exception to a word in that letter? I think not. Now, what was Colonel Ricker's reply? His reply to one of his own engineers, the chairman of that committee, was this: "Jim, I will neither recognize the Brotherhood nor receive the committee." That was Colonel Ricker's reply to that letter. He passed out of his office, took the train, and went to New York. We happened to be standing at the depot, and, after consultation with the committee, we took the next train and followed him to New York. We addressed a letter of similar import to the President of the road, and as Brother Phillips passed by into the office of the President, looking back into the adjoining room he saw Colonel Ricker sitting there. The President was not there. He handed this letter to his private secretary, who opened the letter and read it. The Vice-President came in and read the letter also. The reply they made was: "If you want to see Mr. Knight you must go where he is." "Well, where is he?" "Philadelphia, I suppose." "What is his address?" "Don't know." "Will you telegraph to him?" "No." Brother Phillips came back and reported. I instructed him to return and get a decided answer from the Vice-President whether he would grant us an audience or telegraph to Mr. Knight, the President, the object of our visit to New York. His reply was: "I will do neither one." I ask you, as honest men, what were we to do under those circumstances? Either submit to what they felt disposed to pay or impose upon us or stop work. That is all there was left for us to do. I wish to explain a little further, so as to correct an impression that seems to prevail in the minds of a great many that I have full power to authorize a strike. No such power is vested in any one man. There is no one-man power in the Brotherhood. As soon as we failed to obtain an interview it was my duty to report to the General Grievance Committee of the Brotherhood, which is composed of thirteen members, elected annually—elected for their known ability and good judgment—and lay the facts before them; but our convention was about to assemble in the city of Detroit. We decided not to convene this Committee, but have a committee of the whole convention, and lay the facts of the case before them, which was composed of delegates from all parts of the United States and Canada. Upon the assembling of the convention I laid the facts before them, and they decided by a unanimous vote that if the members upon the Central Railroad of New Jersey decided to stop work they would be sustained in doing so. Then the question reverted back to the men on the road, and it was for them to choose whether they would stop work or not. If they had chosen to work upon the company's terms no one would have found any fault with them; no one would have had a right to say to them: "You must not do it." That is a matter the members of every road must decide for themselves. All we say to them through this committee is, in our judgment you will be justified in stopping work. If they had attempted to stop work without obtaining that consent they would have received no support from the organization. If they stopped work after receiving that consent then they would receive the support of the entire association. There is no one-man power about that. As I said, the convention voted unanimously. It was my duty then, as the presiding officer of the convention, to notify the chairman of the committee of the action of the convention, which I did. They selected the hour and the mode of stopping. Now, a great deal has been said about stopping at the midnight hour, and between stations; but let me say to you, my friends, that Colonel Ricker received nearly six hours' notice that, unless he complied with the proposition presented to him by the engineers every engineer in his employ would stop work at 12 o'clock. That gave him ample time to bring in every train, because the road is only about 120 miles long, and they selected that hour, so they told me afterwards, having some consideration for the convenience of the public. They selected that hour because there were fewer trains upon the road than at any other hour of the twenty-four. If they had wished to inconvenience the public they would have selected 9 o'clock in the forenoon, and it would have caught 2,000 passengers upon the road; but as it was, notwithstanding the notice they gave Colonel Ricker, he gave no heed to it. He sent the train out of Elizabeth fifteen minutes before 12 o'clock, knowing it would stop at 12 o'clock—knowing it could not reach its destination; and there were only seven passengers upon the train, yet we hear a great hue and cry about the great sufferings caused to innocent women and children; but they do not say one single word about the wives and children of the engineers. (Applause.) Now, while we are willing to be censured for stopping between stations, I claim we are no more to blame than the officers of railroads for selling tickets to passengers and sending trains out when they know—at least are notified—that that train would stop wherever that hour found them.

Another reason why the Brotherhood selected that hour for stopping was this, so they told me: that it insured safety and avoided collisions, because if you allow one train to come in, and hold another, serious collisions might occur upon a single track road.

Now, these are the facts in connection with the Central Railroad of New Jersey. Of course it will be for you to decide whether we had sufficient reason for stopping work or not. After stopping, what was done? President Knight came from Philadelphia, met the Committee at Phillipsburg, and he asked them what it all meant. "What do you want?" He turned in the presence of that Committee and says to Colonel Kean, Vice-President, "You have deceived me. I asked you what that letter of Mr. Arthur's meant, and you said it was only a bubble, and had all blown over." I place the responsibility of that strike upon Colonel Ricker, and upon no one else.

Now, what were we asking and what did we strike for? After the engineers did strike, and after President Knight told them that the road was entirely at the mercy of the engineers, did the engineers abuse their power? We often hear it said by railroad managers, "If we don't check this Brotherhood—if we don't put this Brotherhood down—the first thing we know they will want to run our road." Now, let us see. Mr. Knight acknowledged that the road was at the mercy of the engineers. Did they take any advantage of it? Did they abuse that power? No. They simply asked him to give them \$90 a month for 2,600 miles run, or less; and if there is a railroad officer in this hall to-night he will say that is a reasonable compensation. Now, if they had been disposed to take advantage and abuse the power they were possessed of, could they not just as well have said \$100, and have received it? Most decidedly. But they simply asked for the \$90, and Mr. Knight gave it to them. He asked the Chairman of the Committee how soon could he put the trains in motion again? "We will work all night for you to put the trains in motion." And they did work all night, and

had everything in good condition within the next twenty-four hours.

#### THE CAIRO & ST. LOUIS STRIKE.

Now, the next strike we had was on what we call the St. Louis & Narrow Gauge. What did we strike there for? Mr. Canda, the General Manager of that road, was a man, as I found in conversation with him, wholly ignorant of the duties and responsibilities of engineers. He had quarreled with his Master Mechanic until he left him. He quarreled with his Superintendent until he left him, and was going to operate the road himself. The first move he made was to reduce the engineers, who were already working for a dollar a day less than any other road paid running out of St. Louis. He asked his engineers to run 150 miles on the narrow-gauge road for three dollars. They refused to do it. They tried to settle the matter with him, but received no satisfaction. We were telegraphed for. We went to St. Louis, and tried to persuade him he was making a great mistake by allowing his old engineers to leave him and hiring new ones, and that he never paid within 75 cents a day of what the other roads were paying running out of St. Louis. He said he did not consider an engineer any better than a laborer on the track; he said it did not take much of a man to run an engine, and if they did not like to take what he gave them, they could leave. That is the way he talked. They decided to leave. After the matter had been laid before this committee, and they had passed their judgment upon it, they notified the men and they left. What did he do? He undertook to hire other men who were lying around East St. Louis—men who had been discharged from other roads for drunkenness, for stealing, and other unbecoming conduct—many of them entirely ignorant of locomotives. Everything that was done was laid to the engineers who had stopped work; and he came out in the papers accusing them of tampering with the company's property, resorting to violence, and had a number of them arrested; but thus far he has failed to prove anything against any member of the Brotherhood—notwithstanding he has had the aid of the best legal talent in St. Louis; and he would rather spend his money in that way than to pay it for good engineers.

#### THE GEORGIA RAILROAD STRIKE.

The next strike we had was upon the Georgia road. That is a road running from Atlanta to Augusta. Now, why did we strike upon that road? That you may understand the case clearly, I will take you back about four years. On that road at that time they were paying four dollars a day and their meals upon the road. The road is 171 miles in length. The meals were equivalent to about ten dollars a month. The first reduction the company made they took the meals away from the men. One year later they reduced them half a dollar a day. Last August they reduced 15 out of the 45, who hitherto had been receiving full pay, and reduced them one dollar a day. Now, what was their motive in doing that? What was their object in selecting 15 out of the 45 and reducing their pay? It was to divide the men. They reasoned in this way: "If we select a portion of the men and reduce them, the others will take no interest in the matter; they may grumble a little, but it will all blow over; we will try it." And they did try it; but they found they had made a mistake. The very men they did not reduce took the matter up, appointed a committee, and waited upon Mr. Johnson, the Superintendent, and he gave them no satisfaction. In compliance with these rules I have referred to, we were telegraphed for. We went to Augusta. We had an interview with Mr. Johnson, the Superintendent. He offered to restore the reduction to eight of the men. We asked him if the remainder, the seven, were not entitled to as much pay as the rest, and why it was he was making this distinction.

Well, they wanted to make a reduction, and they claimed they had a right to make it as they thought best. We thought otherwise. We said here, "If those men were worth three dollars and a half, and have been receiving three dollars and a half, they are worth it now, and we will not allow any distinction to be made, unless you can show that the men are not actually worth it. If they are not worth it, why is it that you have been paying them for many years?" We could obtain no satisfaction from him, other than he would restore it to the eight. The matter was submitted to this Committee, and they decided that the men would be justified in stopping work. We notified the men. The men decided to stop work; and after a stoppage of 36 hours, they gave them three dollars and a half. Was that good judgment? Was that common sense? Allowing the road to come to a stop for 36 hours, squandering \$30,000, and then giving the men what they asked?

#### THE GRAND TRUNK STRIKE.

The next strike we had was upon the Grand Trunk road. A great deal has been said about that strike. Could it have been prevented? I say yes, and in my judgment men never had more cause for complaint than they did upon the Grand Trunk road. Never was there a class of men more abused than on the Grand Trunk road. In March, 1875, as I alluded to, the policy of the Brotherhood prevented a strike on that road. At that time there were about one-half the engineers upon that road that were not members of the Brotherhood. Conductors and brakemen had been engaged in a strike and they were defeated by the company. The next move the company made was upon the engineers. They had a system in vogue upon that road of paying their men as follows: when a fireman was promoted to be an engineer, he received \$2.25 a day; after he had run 12,000 miles, and had a good record, he received \$2.50; after running 12,000 miles more, and had a good record, he was advanced to \$2.80, which was called the third class, the highest rate of pay. They also had a system of paying men twenty cents an hour for detention time, for all detention time upon the road over the schedule time.

In the month of March an order was issued abolishing the third class, which was equivalent to a reduction of thirty cents a day. This was in 1875. The engineers were about evenly divided—the one-half non-members, the other half Brotherhood. They were determined to have a strike, but by the advice of Brother William Robinson, one of the Grand Officers in Canada, they were prevailed upon to make a Brotherhood matter of it, and we were sent for. Never shall I forget it. It was my first official visit to Canada; and the first greeting I received from the officer of the Grand Trunk, Mr. Blackwell, was, "We look upon you, Mr. Arthur, as a firebrand." That was a very flattering introduction, "firebrand." Why was it that they had that opinion of me in Canada? I will tell you, my friends. Perhaps some of you here to-night recollect the introduction I received when I came here to Cleveland three years ago. I was then published as a rabid agitator, as a striker, and a circular was issued by my predecessor and scattered broadcast over this country, in which I was represented as a deceiver and a false teacher, and that we had taken a new departure; that we had inaugurated a new policy, which was false. The policy of the Brotherhood is the same to-day that it was when it was founded. I happened to have in my possession at that time another circular that this good man, my predecessor, issued when he had authority. I handed this to Mr. Blackwell to read and compare with the other. The one was when the man had power: the other when he had been deposed from office. The one was advising the divisions that were in favor of a strike to notify him of it, and he would name the day for the strike. "Keep your own councils—move cautiously." That was the advice in the printed circular before he resigned. When I handed that to Mr. Blackwell and asked him to read them both, he says: "Mr. Arthur, any message you have to deliver to Mr. Hickson I will gladly deliver." I addressed a letter to Mr. Hickson, seeking an interview with him. He granted an interview, and the result of it, was a peaceable



settlement and a strike prevented; and they went so far as to require my signature to the agreement. That was in March, 1875. That agreement, my friends, for the first three months was honestly complied with. After that it was violated in every conceivable way. Men were reduced from one class to the other for doing their duty.

To illustrate to you what I want you to understand, and railway men will understand the phrase—one Brother reported his valves leaking. Mr. Davis, the foreman at Belleville (and let me say here, we have more trouble with foremen than we have with superintendents and presidents) (applause)—Mr. Davis, with superintendents and presidents (applause)—Mr. Davis, the foreman, because this man reported the valves of his engine leaking, which was his duty to do—and an engineer that would not do it ought to be discharged—reduced him from one class to the other, and told him he did not know anything about the valves.

Now, what effect does a leaky valve have upon an engine? I will tell you. An engine allowed to run with leaky valves will consume twice the amount of fuel, doing the same service, that she would if her valves were tight. Some of our master mechanics don't care anything about that, because the fuel don't cost them anything. It all comes out of the same treasury; and an engineer that would run his engine with leaky valves, and not report it to his Master Mechanic, as I said before, ought to be discharged. A good engineer would do it every time.

Of course it is not his fault if the Master Mechanic does not fix it; it is his fault if he runs his engine with leaky valves and does not report it. If a man broke a link or connection—for the least mishap or misdemeanor—they would reduce him from one class to the other. The men began to grumble and complain.

When our convention met in the city of Detroit, last October, what did they do? The delegates from the divisions of the line of the Grand Trunk road had obtained leave of absence to attend the convention, from Mr. Wallis. After granting leave of absence about one week before the convention assembled, that leave of absence was canceled, and they were not permitted to come to the convention. We considered that was a direct insult to the whole organization. Mr. Hickson was in Detroit at that time, and by instructions from the convention I called upon him at the Russell House, and obtained permission from him to have those delegates come. We telegraphed to Mr. Wallis, but heard nothing from him. It passed on a month later, and they introduced what they called the fourth class, paying the engineers a dollar and sixty cents a day, and the firemen a dollar a day. The engineers remonstrated. They sent a committee to Montreal. Mr. Wallis, the Mechanical Superintendent, instead of receiving them kindly, and treating them as men, he insulted them; he abused them and sent them home. They sent for me. It was my duty to ask them what they had done. I found out they had not seen Mr. Hickson. I refused to go until they had seen Mr. Hickson. They went to Montreal again, and saw Mr. Hickson, and Mr. Hickson received them very cordially, but insisted upon maintaining the fourth class. The men were not satisfied. He told them to return to their homes, and the agreement of 1875, with the exception of the fourth class, would be complied with. They returned home. About one week after they returned home, each one of them was served with a printed notice, that on and after Dec. 23 their services would be no longer required. What did that mean? It meant a direct attack upon our institution; we so construed it. We were sent for and went to Montreal, and addressed a letter to Mr. Hickson, such as I repeated in your hearing to-night. Mr. Hickson was in New York, but his private secretary read the letter and notified Mr. Hickson, and we were referred to Mr. Wallis. We addressed a letter to Mr. Wallis, and his reply to our letter was that he did not know of any grievance that needed the assistance of a mediator. We notified Mr. Drinkwater, Mr. Hickson's secretary, of Mr. Wallis' answer, and spent three days in Montreal trying to reach those officers. We failed to do it. They would not receive us. They would not recognize us. In order that Mr. Hickson could not say that we took any advantage of him during his absence, we committed to paper what we wanted, and left it in the hands of the Montreal committee.

Now, what were we asking for? Simply that the agreement of 1875 be complied with, and those engineers who had been notified that their services would be no longer required, be reinstated, because they were the oldest men in the service of the company, and all of them prominent members of the Brotherhood. Mr. Hickson returned, and this committee presented those propositions to him and he refused to accede to them. We then laid the matter before the General Committee, and they decided that the men would be justified in stopping work. We notified them of that fact, and before stopping work they notified Mr. Hickson that unless he acceded to their propositions they would stop Friday evening, at 9 o'clock. He paid no attention to it. The result was they stopped, and after a stoppage of 108 hours that great highway of Canada, Mr. Hickson gave the men what they asked for. We were sent for by the men, with the understanding that we should proceed to Montreal with the committee and arrange details. We did so. We met Mr. Hickson, and were received very cordially. He did not want to hear a word about the strike or the cause of the strike; he wanted by-gones to be by-gones, and to establish a good feeling between the men and the company. We were perfectly willing to do so. After we had all the details arranged, we told him the first time we went to Montreal we had to pay our fare, and we thought so too; so he gave it back, amounting to \$119.85. (Laughter.) Now, there was a good feeling established between Hickson and the engineers—a better understanding than they ever had before. Messrs. Blackwell, Davis and Welsh, the foremen who caused all this trouble, who gave the bad advice to Mr. Hickson, have been given to understand by Mr. Hickson that they must use the men well or their services would not be required.

#### THE BOSTON & MAINE STRIKE.

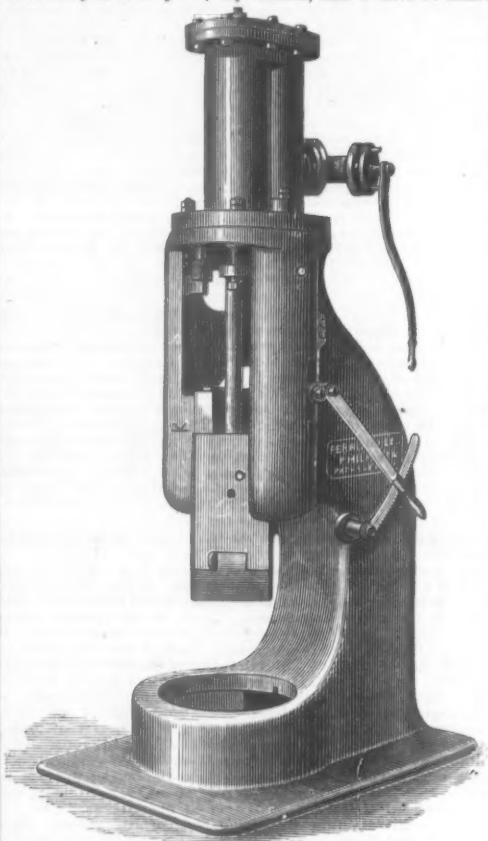
The next strike we had was on the Boston & Maine. That is the one there has been such a great hue-and-cry about. It was during that strike, my friends, that I was accused of saying in the city of Boston that I would stop all the roads running into Boston. I want to say here, most emphatically, that it is a base falsehood. No such language ever fell from my lips. I will explain, after relating the cause of the strike, all that was said by me. On this Boston & Maine road, previous to the first of January, 1876, the engineers were receiving \$3.50 a day, and a bonus of 25 cents a day, payable quarterly. But the company reserved the right to pay or withhold it. It was known as good-behavior money. On the first of January, 1876, an order was issued reducing it 10 per cent., which brought the pay down, including the bonus, if they received it, to \$3.40. They had a system there of paying the engineers, when first promoted from firemen, \$2.25, and an advance of 25 cents every three months until they reached \$3.25, which was the highest any of them received until they had a regular schedule train to run. The highest price paid was \$3.50. After the reduction of 10 per cent., which brought the regular pay down to \$3.15, during the year they did not advance these young men from one grade to the other, which caused a great deal of dissatisfaction.

One year ago this month I happened to be in Boston, visiting Division 61. At the request of the engineers running upon that road, we called upon Mr. White, the President of that road. We had a very pleasant interview with him. We tried to persuade him to restore the reduction, but he would not listen to it. We submitted. Time passed on, and these young men failed to receive any advance. Naturally it created dissat-

isfaction. They would go to Mr. Smith, the Engine Dispatcher, and he would receive them with a volley of oaths. They would go to Mr. Furber, the Superintendent, and he would greet them with a growl. They would go to Mr. White, the President, and he would refer them to the directors; and when they went to see the directors, they could not find them. So they went from one to the other, and were put off from month to month, until they selected a committee, with a determination to find out who had the power to advance their wages. The committee drew up some propositions. The men upon that road upon passenger trains had been accustomed to running from 110 to 150 miles a day. In the propositions submitted to Mr. White, they asked three dollars and a half for all engineers who had been in the service of the company over two years, and that one hundred miles should constitute a day's work. That would be the same pay that they are now paying upon the Lake Shore road.

When the propositions were presented to Mr. White, he looked them over, leaned back in his easy chair, and says: "We are paying you all we can afford to; we are too poor to pay you any more. This money of the widows and orphans we hold in trust will not allow me to pay any higher wages. We must pay our dividends to these widows and orphans." No reasoning—merely, "we are too poor and cannot afford to pay you any more." That did not at all satisfy the men, because they had a printed annual report, and in that report we found that they had paid 6 per cent. dividends, and had nearly \$92,000 left, charged to profit and loss account. So the men thought they were not very poor. Then Mr. White and Mr. Furber, during the year, had received an addition of \$500 each to their salaries.

After the committee failed to obtain satisfaction, we were sent for. We went to Boston, as it was our duty to go; and I want to say at this point, my friends, that I have no desire



STEAM HAMMER, BY MESSRS. FERRIS & MILES, PHILADELPHIA.

whatever to interfere with the engineers and the companies. I would prefer at any time that the men would settle their own affairs; but I am their servant, and when they send for me it is my duty to go, and that duty I will discharge in the fear of God, and without fear or favor of any living man. (Applause.) I went to Boston. We addressed a courteous letter to Mr. White, such as I have repeated here to-night, and what was his reply? Mark it. He said to the chairman of the committee, "Who is this man Arthur? I don't know him. I won't allow any man to interfere between me and my engineers." Now, there he told a falsehood uncalled for. He had a right to refuse me an interview—a perfect right. It was unnecessary for him to lie about it. He did know me. He met me a year previous, and we had a very pleasant interview, as pleasant as it was possible to have with him, because if you saw the man once and looked in his face, you would think it was impossible for him to be pleasant. (Laughter.) When I received that reply, I did not get on my dignity, as we often speak of, and say we will strike. I did not care because I was ignored by Mr. White. I have a good deal of independence about me, and if a person does not want to have anything to do with me, it does not hurt my feelings—not at all. But I said to the Brothers, when they returned with that answer, "We do not want any strike here; we have been compelled to resort to strikes upon four different roads within the past few months; we are getting a bad name. All the odium of these strikes has been heaped upon me, and I feel it keenly, and I would do most anything rather than to have a strike." I told them to strike out the clause of the proposition wherein they were asking that 100 miles should constitute a day's work, and give them the same miles more than any other road asks for the same money. Give them 151 miles a day for the \$3.50. Confine yourselves to the price, saying nothing about the miles, and perhaps Mr. White will accept it. They made that change. They went back to Mr. White the second time, and he received them in the same manner. He says: "We are too poor to pay you any more; we are paying you all we can afford to." This is all the satisfaction that he gave them.

Now, I ask, what were we to do? We submitted the matter to the General Committee, and they voted that the men would be justified in stopping work, and the men decided to stop work; but before doing so they notified the company and they gave them four hours to make up their minds to accede to their requests, which were very reasonable; but they would not, and the men stopped. It is true they did stop between stations, but let me say to you, my friends, that the passengers who have been accustomed for the past twenty-five years to ride behind those engineers, told them to stop on the road and they would walk for a month; not to mind them. They encouraged them

to stop between stations. (Applause.) We do not say, and never have said that that is exactly right; but we do say that while the company has sufficient notice to prevent it, they ought to be condemned as well as the engineers. (Applause.) Now, we were in Boston. They clamored for a public meeting, and we had a public meeting at Faneuil Hall. It was at that meeting that I have been accused by the public press of threatening to stop all the roads running into Boston, and I say it is a base falsehood. I challenge any living man to prove that any such words ever fell from my lips. I know better than to use such language as that. I will tell you what I did say at the Faneuil Hall meeting; it was this: "I am informed that Mr. Taylor, the Master Mechanic of the Old Colony road, is using all his efforts in furnishing engineers for the Boston & Maine, and, if that be true, Mr. Taylor must not find any fault if his engineers decide to stop work. This is a quarrel between the Brotherhood and the Boston & Maine. All we ask of the other companies is to mind their own business and leave us alone. (Applause.) If they combine to defeat us they certainly cannot find fault if the men refuse to work for them." (Applause.) That is what I said. Is that threatening to stop all the trains on all the roads running into Boston? No. I was also accused of traducing and slandering the character of the employees of the Boston & Maine, meaning this Mr. Smith, the engine dispatcher. Well, my friends, as I said in Lowell, and in Lawrence, and at Newton, if telling the truth is slander, then I plead guilty. If a man is a thief, and I know it, I believe in telling him of it. I believe in calling things by their right names, and I said this Mr. Smith had perjured himself, and I could prove it. A bold assertion. If it was not true, don't you think Mr. Smith would have compelled me to prove it? Aye! He would. It was currently reported in the city of Boston that they were going to arrest me. For what? Telling the truth? That I will do every time, no matter whom it hits. (Applause.) It was this Mr. Smith, his abuse as much as the reduction of wages, that caused the strike. A man holding a position of authority who will greet his subordinates with a volley of oaths, or any man that will be guilty of using profane language to his subordinates, ought not to be tolerated in a position of authority for one moment. These are the facts in connection with the Boston & Maine strike.

#### THE READING STRIKE.

Now we come to the Reading road. What caused that strike? Not a reduction of wages? No; but Mr. Gowen and Mr. Wooten, according to their own circular, fearing that the Brotherhood would next attack their road, issued a circular requiring all their engineers to sever their connection with the Brotherhood or leave the service of the company. When that circular was issued we were telegraphed for. We went to Reading; we met the Brothers. What was our advice? After reading the circular over carefully we could not fail to detect the deep cunning underlying it. It says: "Owing to the high-handed interference upon other roads of this Brotherhood, we feel compelled to request our engineers to sever their connection; but we do not wish to have them forfeit any of the benefits without giving them greater benefit in their stead at a less cost." After talking with the engineers we said to them: "Brothers, in this matter you must choose for yourselves. You know what the Brotherhood is; you are a part of it. You know what the Reading Railway Company is, and you must choose for yourselves; I have no inducements to hold out. If you decide to remain in the Brotherhood you must trust the Brotherhood for what they will do for you. If you decide to renounce your allegiance to the Brotherhood, then, of course, you are cut off from all the benefits and privileges arising from membership in the Brotherhood." It was rather amusing, in reading some of the papers, to find the statement that they had such an easy task; that out of four hundred only fifteen were willing to remain with the Brotherhood. Time has proved that to be a mistake. They decided to remain with the Brotherhood, and they quit work in a body, thus proving to the world their loyalty to the association. Every once in a while we read in the papers that the road is being operated safely; that in a short time the new men, becoming acquainted with the road, will do as well as the old ones. They do not say anything about the engines that are being burned and tied up. They do not say anything about the coal they are unable to move. Of course the company has a right, we concede, to say, "We will not employ union men," but when they assign a reason, and that reason is false, then we have a right to take exceptions; and as a railway corporation is a common carrier, the public has a voice as to how they shall manage their roads, and I say, when a railway corporation, for the sake of compelling their engineers—old, true, tried and faithful men, who have spent the best part of their lives in the service—to renounce their allegiance to an association like the Brotherhood, and employ just such men as they can gather up—men that I know have been discharged from other roads for collisions, for drunkenness, for unbecoming conduct—men who cannot get a situation upon roads under ordinary circumstances—when they hire such men and place them upon their engines, regardless of the public safety, I say the public have right to raise their voices and protest against such conduct on the part of a railway corporation. (Applause.)

#### Ferris & Miles' Steam Hammer Exhibited at the Centennial.

The engravings in this number were received from Engineering some months ago, but their publication has been delayed until now. The following description of the steam hammer is given by Engineering:

The hammer has a weight of head of 700 lbs. Several peculiarities of design will be noticed, the most striking of them being that the head *A* is set at an angle in the frame. The die *C* is of the oblong form shown in the drawings, as well as that of the anvil die *D*. The object of this arrangement is to enable the workman, after drawing out his work across the short way of the die, to turn it and finish it lengthwise without being inconvenienced by the frame. By this means skew and T-shaped dies can be dispensed with, and the full surface of the ram utilized.

The latter is moved between the guides *E, E* and held in place by the steel plate *F*, bolted through the frame *B*. The valve *G* is a plain cylinder of cast iron, enlarged at each end to work in the cylindrical seats *H, H*, in which the parts *I, I* are placed. Steam is admitted through the valve *J*, and circulates round the valve *G* between the seats. The exhaust chamber *K* is below the cylinder, which therefore drains condensed steam into it at each stroke through the lower steam port. The exhaust above the piston passes down through the interior of the valves, as shown by the arrow on the drawing. The valve-stem *L* is connected with the valves in the exhaust chamber. No stuffing-box is therefore required, there being only atmospheric pressure on each side of it. This combination enables the valve to be so perfectly balanced that it will drop by its own weight while under steam.

The automatic motion is obtained by an inclined plane, *M*, upon the ram *A*, which actuates the rocker *N*, the outer arm of which is connected by a link to the valve stem, and thus gives motion to the valve. The valve is caused to rise in the up stroke by means of the rocker *N*, and its connections through the inclined plane. The steam is thus admitted to the top, which drives down the piston, while the valve and connections follow by gravity, thus reducing considerably the friction and wear upon the valves. In very quick work the fall of the valves may be accelerated by the aid of a spring; or it may be retarded in heavy work by friction springs, so as to obtain a

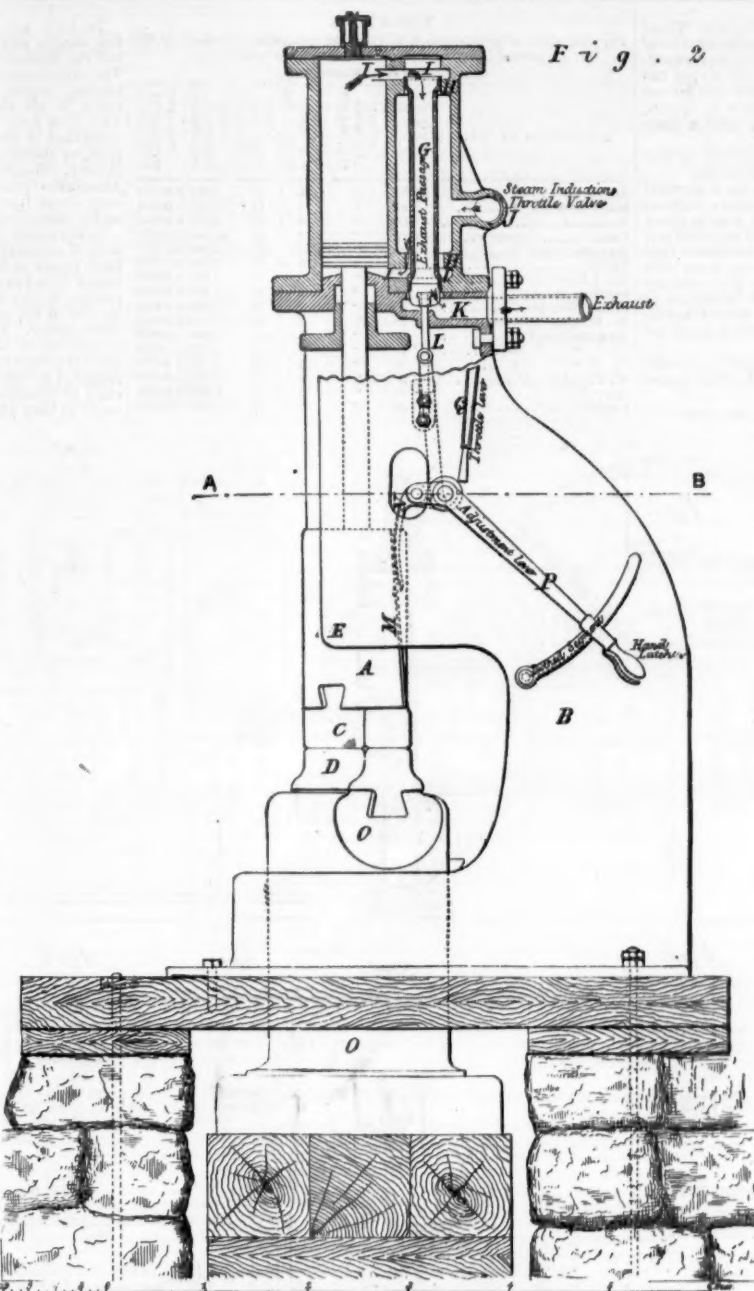


a heavier blow by a fuller admission of steam. For general work, however, the arrangement shown is perfectly effective, and as the rocker *N* is hung upon the adjustment lever *P*, any required variation can be obtained by the movement of the lever. Single blows can be struck with any degree of force, or rapid succession of constant or variable strokes may be given.

The anvil *O* rests upon a separate foundation, in order to reduce the effect of concussion upon the frame. The drawing illustrates the arrangement. The bed is long, extending beyond the hammer on each side so as to give plenty of area, and the ends are left open for convenient access in case the anvil should settle and require readjustment.

Another writer in discussing the steam hammers exhibited at the Centennial says of them:

In the hammers of Messrs. Massey the frames are constructed open, that is, the steam cylinder and guides are supported on a pair of standards or legs, with a free open space between, so that in working long bars they can, if necessary, pass through the frame at a right angle or parallel to the dies as they may be arranged; in other words the dies can act transversely or parallel on long pieces as the nature of the work may demand. This same object is in effect attained by Messrs. Ferris & Miles, of Philadelphia, by setting the hammer block in a diagonal position as shown in Fig. 7; *a* is the hammer block, *e* the guides, and *c* a section of the main column, which is of box form. The dotted lines indicate how long pieces can be worked either transversely or parallel to the dies, and the frame offers no obstruction. One difference between the two plans would be that with the diagonal arrangement a piece can be at once removed sideways from the hammer, and that the range of pivotal adjustment is greater, that is, a long piece can be changed at will from the long to the short way of the dies without stopping the work. What importance this may have of course depends upon the kind of work to be performed, and aside from the convenience of adjustment before named, the double-leg arrangement seems to have some points of advantage. The space between the legs above the range of the work furnishes a convenient and protected position for valve gearing. The whole machine is symmetrical and balanced in appearance, the disposition of material in the framing is such as to oppose strains in a line of the hammer movement. Torsional strains upon the main frame, those resulting from lateral thrust of the dies, would of course be best resisted by a cored or box frame, but when it is considered that in the Morrison arrangement such strains have to be resisted by a piston rod alone, and that such hammers have long been successfully in use, an open plate frame would seem to have all the rigidity required. The fact is, as before mentioned, that the value of different arrangements of steam hammers is more to be determined by how far breaking is guarded against than by how near the theoretical conditions of use are correct. A hammer is at best a rough and much abused implement, chargeable usually with a great amount of repairing, and repairing of the most expensive kind. From the beginning, steam-hammer construction has in America tended to a greater separation of parts. The introduction of what we will call the Schwartzkopf type, with a solid anvil seat, followed the Nasmyth and Morrison types, and was further ventured upon in a few cases by casting the steam cylinder also in one piece with the main frame, but piece after piece were



STEAM HAMMER, BY MESSRS. FERRIS & MILES, PHILADELPHIA.

any device to which the shock of the blows are imparted soon gives way, but a swing bar, as shown in Fig. 6, bearing lightly against the block *e*, and nearly in the plane of motion, is but little affected by the concussion.

Most of the steam hammers exhibited at Philadelphia have their valve gearing operated by means of these pendulous bars.

The diagrams, which are merely to illustrate a mode of arrangement, correspond in most respects to the practice of Messrs. Ferris & Miles, of Philadelphia; *a* is the steam cylinder and *c* the valve casing. The swing bar *o* is pivoted at the fulcrum *s*, which is moved by a hand lever in the usual manner to change the range of the valve and stroke of the hammer. The valve, which is cylindrical and balanced is operated by a rod *m*, which passes through the exhaust port and is not exposed to direct pressure of the steam, consequently does not require packing. This latter is a matter of some importance as will presently be explained; *i* is a lever or extension of the bar *o*, and *n* a movable weight which can be moved toward or from the fulcrum *s*.

As the block *e* is raised the inclined face at *b* moves the arm *o* and the valve rod *m*, as the diagram will explain. When steam is admitted above the piston, the block *e* is driven rapidly downwards for the working stroke, the arm or bar *o* following as the speed may determine, or as the weight *n* may be adjusted. Gravity alone is depended upon for the downward stroke of the valve, and as the adjustment is one of some delicacy it is evident that a packing gland on the rod *m* might have considerable effect in retarding the valve movement. As before mentioned, the valves are so arranged on some of the steam hammers exhibited that the valve rod passes through an exhaust steam chamber only and no packing is required, or at least is dispensed with in this case.

So long as the bar *o* remains in contact with the block *e* on both the upward and downward stroke, the effect is the same as though a positive connection were employed and rebounding blows are given; that is, steam is admitted beneath the piston before the stroke is complete and the hammer is cushioned to some extent, but if the block *e* outruns the swing bar *o*, as shown in Fig. 8, the blow becomes "dead," as it is called, no steam being admitted beneath the piston until the bar *o* swings nearly into contact with the block at *b*, Fig. 8.

This time is dependent upon the rapidity of the hammer movement, and the inertia of the valve gearing, including the weight *n* which can be moved to govern the nature of the blow. As before remarked, the diagrams are drawn to illustrate a principle merely, and not in accordance with any special example; the weight *n*, for instance, when employed is attached by an adjustable arm to the pivot or axis at *s* so as to be adjusted when a hammer is at work. Automatic valve gearing is employed to a much greater extent in America than in England or on the Continent. Formerly nearly all hammers, regardless of size, were fitted with self-acting gearing, which could be used or not as occasion might require, but at this time the practice in America for large hammers is much the same as in Europe; such things adjust themselves by experience to the wants of practical use.

The hammers illustrated are manufactured and were exhibited by Messrs. Ferris and Miles, of Philadelphia.

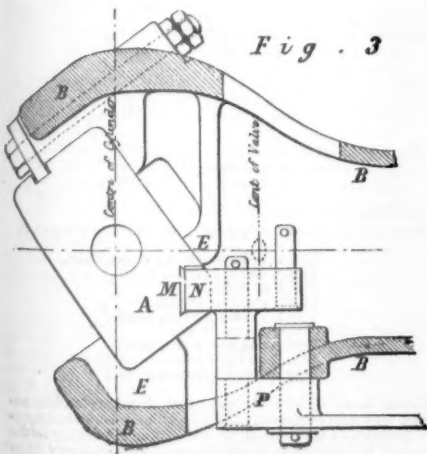


Fig. 3

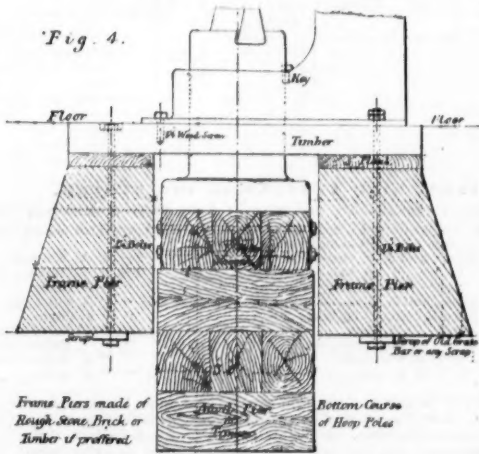


Fig. 4

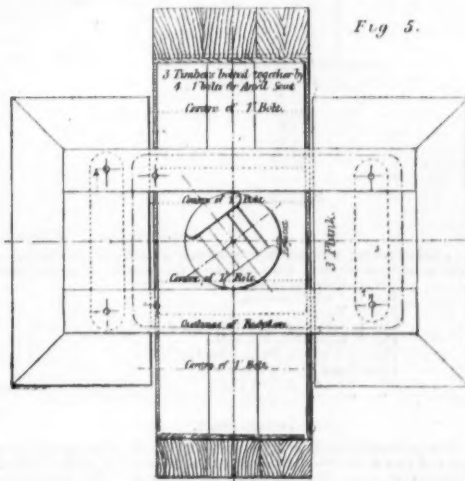


Fig. 5

made detached and bolted together, as experience showed how wrong it was to make nearly the whole value of a machine dependent upon the endurance of some one portion.

The difference in the material required for various parts, such as the cylinders, main frames, and anvil blocks, was alone a sufficient reason for avoiding the "one-piece" plan, which was at the same time gaining ground in nearly every other class of machine tools. Steam engines had furnished a precedent in this direction, and when the wear and breakage of details were known, it is strange that a separation into parts was not sooner adopted.

In any machine exposed to concussive shocks it is evident that economical reasons exist for separating into detail as much as possible whatever is liable to break, but there is also another reason for this, which applies especially to power-driven hammers. Joints, however firmly they may be bolted together, still impart some elasticity, and however suitable cast iron may be for the framing of most kinds of machines, it is, as engineers well know, wanting in that elasticity which hammer frames seem to require. We do not assume that joints rigidly bolted together can impart much elasticity, but if a frame, such as those of Messrs. B. & S. Massey for example, were cast in one piece, the liability to fracture would no doubt be increased.

In watching the course of practice in steam-hammer construction there are certain plans which, for details such as

valve gearing, are gradually becoming general; of these the pendulous swing bar, operating by sliding on the hammer-

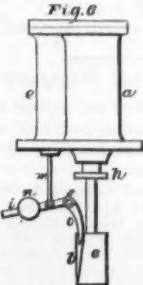


Fig. 6

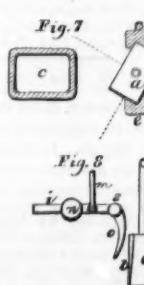


Fig. 7

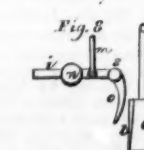


Fig. 8

head can be mentioned. The reason for this is obvious enough now, when it is known how difficult it is to maintain any positive connection with a hammer-head; a link, lever, tappets, or

# MASTER MECHANICS' ASSOCIATION.

## REPORT OF THE COMMITTEE ON LUBRICANTS.

The committee appointed at the last annual meeting of our association to examine and report upon the subject of "lubricants" beg leave to submit the following:

From the reports submitted to your committee from railroads in different parts of the country, and from our own experience, we have no hesitation in recommending for general use for the lubrication of the machinery of locomotives and the journals of both locomotives and cars a good quality of natural earth oil. We believe that, taking into consideration both cost and lubricating qualities, it is an entirely satisfactory article for general use. An oil of this kind treated so as bring it to about 28 deg. gravity has been found reliable and trustworthy for lubricating locomotives on even so sandy a road as the Lake Shore, the service on this road being perhaps as trying for machinery as that of any in the country. Oils of this character are favorably spoken of by members from Canada and members as far south as Kentucky. No members representing roads further south have reported. Hence we infer that naturally oils are serviceable and safe in variable climates. Your committee beg to submit a very interesting statement of results obtained by testing various oils on a machine belonging to the Lake Shore road, very ingeniously arranged to fulfill all the







here. Without these provisions the management for the time can defy the shareholders, because they cannot learn the names or interests of their copartners, nor communicate or consult with them. At present the directors of a leading American railway are resisting at law an application by shareholders to see the register, and seem likely to succeed in maintaining secrecy. But the register of a large company is so enormous that even free access to it, and right to get a copy made, was found of little avail in this country until the annual printed copy was made compulsory, which has been found so useful to all concerned.

2. A uniform system of accounts should be required, as in this country since 1869, properly distinguishing between capital and income. Before 1869 each company in the United Kingdom had its own form, which it altered at pleasure. Each of these alterations broke the continuity of the accounts and prevented comparison between what preceded and followed it. Any comparison of the accounts of different companies was almost impossible. At that time the Americans were ahead of us, for the leading States then, as now, required reports to be made annually to them (though not to the shareholders), containing information of great value. But our compulsory form is superior in the essential point of clearly separating and stating capital and revenue, both receipts and payments. Capital is better defined here, for it is all statutory, and the statute authorizing each sum has to be quoted. An American railway company, on the other hand, has as complete power over its capital as any private firm has, and its capital account would be short and simple. The best American railways have become so good as they are by largely applying revenue to capital purposes, denying themselves well-earned dividends in a way which shareholders here would not submit to. This prudent course, more common before English, Dutch and German loans were so easily obtained, made the forms of account less important. Now, however, the benefit of uniform accounts would be incalculable, and the superiority of the English form in the main is incontestable. It should still be improved, even for this country, by dividing "Locomotive Power" into two—one for "Maintenance of Locomotives," to be summed up with the maintenance of way and of vehicles, so as to show the whole cost of upholding; the other for "Locomotive Running," to show the working cost, and to be summed up along with the "traffic and general charges." These running and traffic charges must always be fairly met every year; no skill can shirk them. But maintenance in any part can be swelled or pinched, and this it is important to see. Besides, there are some English accounts where the present form is made nugatory by subtracting from the total cost of the "locomotive power" a large undetailed portion—say a fourth to near a half—as "work for other companies," leaving the cost of the company's own locomotive maintenance quite uncertain, though one of the most important items to know. The form should also have everywhere the addition (made all along with common consent by the chief Scotch companies) of four columns in the Revenue Account, showing what each item of receipt and expenditure amounts to per train mile and by percentage of receipts, both for that and the corresponding half-year. (In America it would be the previous year.) These extra columns give great facility for comparison with previous periods and other lines. In two points the American forms still excel ours; they not only give the number of passengers, as we do, but also the tons of goods and minerals carried (which some Scotch accounts give) and the number of passengers and tons respectively carried one mile, which is extremely important for comparison, but is never given in this country; also, they state their total mileage of railway, reduced to "single track" or way, including sidings as well as lines. For want of this the most posthumous comparisons are constantly made in this country, both as to earnings and expenses; for the sidings on lines of light traffic are of nominal extent, while on some busy goods lines they nearly equal the railway itself, though they are utterly ignored in all returns and statistics. Amalgamating the English and American details, we should have accounts greatly superior to either.

Besides all this, American accounts would henceforth give much greater confidence if they set forth all existing guarantees and other obligations by the company. These are often most proper and greatly for the benefit of both bond and shareholders. But in this country they could not be given without the express authority and special confirmation both of Parliament and the shareholders, as above explained. If obligations have to be put and kept prominently before the shareholders, they will rarely do harm.

Were the above reforms obtained they would be efficient and sufficient, provided they are well and vigilantly used. There is a wise old Roman maxim, that laws are useful, not to the slothful but to the vigilant; and it is quite as applicable to modern railways as it was to ancient estates. Other proposals have been made, some of them from very high quarters, which I venture to think are either unattainable or would be ineffective.

1. Most Englishmen and some journals of authority wish English control and directors, as if this were a panacea. But the long history of the Grand Trunk and Great Western of Canada, two of the most unfortunate hitherto, shows how little the best English Board secures success in America. The Trunk, especially, has from the first had as directors some of the best informed and most successful men in England. Besides, the Americans would no more permit their railways to be managed by London boards than the English would allow railways here to be ruled by New York boards. Also, it is not a mere question of the English, for the Germans and Dutch are large bond and shareholders; other Continentals have material interests, and the Americans themselves have generally by much the largest.

2. Some Englishmen have proposed that bondholders should get control. But the bonds are almost all "to bearer," so that their holders are necessarily unknown. Were they invested with voting powers they could only use these, like the shareholders of Continental companies whose shares are "to bearer," by depositing their bonds so many days before the voting with certain banks appointed for the purpose. But that involves trouble and some risk in transmission, especially for holders not at the places of deposit. And it is the worst of all contingencies, for so large a part of the holders abstain from voting, owing to the trouble of deposit, that a comparatively small proportion of votes controls the company. Besides for bondholders to vote is an idea quite contrary to the spirit of American law. They have the powers of mortgages, which are much higher than those of English debenture-holders; and it would be a contradiction for them also to have the powers of the mortgagees.

3. An able American proposes that stocks and postponed bonds should cease to be liable to foreclosure at the instance of higher creditors, so as to enjoy permanence like ours, and be capable like them of waiting with certainty for better times. But this, however desirable, could only be effected either by taking from existing prior mortgages their powers of foreclosure, which would be an unprecedented and inconceivable interference with vested rights, or by waiting till these prior mortgages have run off.

4. A distinguished American financial paper proposes that every company be obliged to publish monthly—1, the gross earnings; 2, net receipts from other sources (these two heads to be summed together as "total receipts"); 3, operating expenses; 4, extraordinary expenses; 5, "net cash surplus applicable to interest or dividends," followed by statement of its capital stock, bonded debt and floating debt. The information would, of course, be useful. But as an account it is defective,

because, like most American accounts, it fails to separate either the payments or receipts belonging to capital from those belonging to revenue. The best American railways are probably more conservative in their finance than any in Europe. But if they had accounts improved somewhat on the English plan the excellence of the good and the faults of the bad would be much more visible than they are.

There is at present a real desire in America to improve the management of their companies, and a temperate discussion of the measures needed will be welcomed by many. But, after all has been done, their usefulness will depend on the vigilance of those interested, just as in companies at home.

#### Convention of the Southern Railway and Steamship Association.

Under date of May 26, the following circular was issued by Mr. Joseph E. Brown, President of the Association:

Notice is hereby given, that a convention of the Southern Railway and Steamship Association will be held at the St. Nicholas Hotel, New York City, at 1 o'clock p. m., on Wednesday, 27th day of June, 1877.

A full attendance of managers, directors and committees upon transportation, of the various companies, members of the Association, is urgently requested. Managers and general officers of other transportation companies interested in the freight business of the South and Southwest are also cordially invited and requested to attend.

At this convention the General Commissioner will propose one or more amendments to the agreement of organization, having in view a more prompt and satisfactory settlement of balances. To secure this end the General Commissioner proposes a daily deposit by terminal roads of 25 per cent. (or such other sum as may be necessary) of the revenue received from competitive business.

Your attention is particularly called to the accompanying letter from the General Commissioner, explaining nature of proposed amendment to the agreement of association.

This notice is made necessary by Article 8 of agreement, requiring two weeks' notice of changes proposed in agreement or organization.

[The proposed change in the agreement is presented in the following letter from Mr. Virgil Powers, the General Commissioner:]

MACON, GA., May 26, 1877.

For the purpose of having proposed change in agreement fully understood, and obtaining in advance of Convention the views of managers upon same, I submit herewith a new article which I propose to be incorporated in the agreement of association, to wit:

"For the purpose of securing prompt settlement of balances as per accounts rendered monthly by the General Commissioner, it is hereby agreed that each southern terminal road shall cause to be deposited daily in some bank or other safe depository, at each point where division of business is made, said bank or depository to be determined by the terminal roads, 25 per cent. (or such other percentage as may be necessary, to be determined by the General Commissioner) of all collections from south-bound competitive business, from which deposits the General Commissioner shall upon completion of accounts for each month, pay balances on both cotton and merchandise due by said terminal road and its through connections, returning to said terminal roads the amount remaining after payment of balances.

"The deposits made to specify the line for account of which they are made."

By the adoption of this plan (the sum deposited to be varied as circumstances require it, so as to secure full payment of balances), the difficulties which have heretofore prevented the full carrying out of the object of the Association will in a great measure be removed, and in a very short time the benefits of co-operation and combination be felt by all.

This plan can be adopted and operated without any change in the arrangements at present existing, for keeping of accounts by each company with its connections. The settlements of balances would be made with and through the terminal roads at each division point, who would forward the vouchers of this office to connections as cash, in same manner as loss and damage, overcharge and other vouchers are now paid and forwarded. The only additional labor will be the opening of an account by each terminal company with the General Commissioner, and the daily deposits and taking receipt therefor by the terminal agents.

I would further recommend as part of this plan, and as a safeguard to all, that each initial agency be required to forward daily to the General Commissioner a duplicate of each way-bill to competitive points. This would be a protection, in addition to those now operated by each company, against errors in classing, assessing, etc.

I send you several copies of this letter and request that you will return one copy to me as early as a day as possible, with your endorsement approving or disapproving the plan, together with any remarks, amendments, etc., you may see fit to offer.

#### Contributions.

The Translators of Weyrauch.

NEW YORK, June 11, 1877.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Mr. Mansfield Merriman appears very desirous of assuring the public through your columns that he is not one of the translators of Weyrauch's "Iron and Steel Constructions," and would rather seem to intimate that I had endeavored, in some way to publish this piece of misinformation. The facts are simply these: Mr. Merriman wrote to me Jan. 23 recommending the book as an "eminently practical one, filled with statistical information concerning experiments on the strength of materials, &c.," and added he "should be glad to make arrangements for translating it." Not having a copy of the work, I wrote to Mr. Merriman to send me his for examination, which he did; and finally on the 11th of February he by letter arranged with me for a translation of it. At this time, the matter of my "Monthly Record of Scientific Literature" for Feb. 15 was ready to be printed. This "Record" has a wide circulation among professional readers, libraries, colleges, as well as in the trade, and is a medium of announcing new books, as also for bringing those already published before the public. In order to announce Mr. Merriman's translation in it, I did, at the latest practicable moment, on receipt of his letter, make such announcement in the "Record" of Feb. 15, but like many things done hurriedly, an error occurred in the spelling of Mr. Merriman's name. I wrote to him an apology for this, stating how it happened, and it was not until after this that he wrote me that he intended to withdraw from his arrangement with me, because he had learned that Mr. DuBois had also commenced a translation. As soon as I received this information I put the

work in other hands. Since then, and aside from the announcement in the "Record" for Feb. 15, Mr. Merriman's name has not to my knowledge or with my consent appeared in connection in any way with my translation. Whatever publicity it has had, in association with him as translator, is due to the editors of the *Journal of the American Society of Civil Engineers*, who took his information from the "Record," including the erroneous spelling of Mr. Merriman's name.

So far as the unknown translator of my edition is concerned, I have no doubt he can answer any charges of which he is accused in a very general way of mistranslation and errors; but from the reviews which the two editors have received in our leading professional papers, saying nothing as to the one which appeared in your journal and to which Mr. Merriman is pleased to refer, I should think that the question of merit as to the accurate rendering of the German into English had been already decided more in the favor of the unknown translator than of Prof. DuBois. The reference to the property right of the author in the translation is, I think, a little indelicate on the part of Mr. Merriman, considering Prof. DuBois' connection with a proposed translation of Volume Two of "Weisbach's Mechanics," the assignment of a translation of which work had been made to me from the late Prof. W., both for this country and England, and of which I published Vol. 1 some years ago.

Finally, the metric tables and other items which appear in Prof. DuBois' edition are simply pieces of book padding. These tables can now be found in any respectable arithmetic, and the matter in Prof. Thurston's appendix, with all due respect to its value, has, as the *Scientific American* expresses it, "been repeatedly published in substance elsewhere."

D. VAN NOSTRAND,

NO. 23 MURRAY STREET, NEW YORK.

#### The Springfield Experiments with Locomotives.

JUNE 11, 1877.

TO THE EDITOR OF THE RAILROAD GAZETTE:

I saw in your paper of the 8th inst. an extract from the *Springfield Republican*, giving an account of an experiment with a "dynagraph" car on the Boston & Albany Railroad. Much valuable information is contained in the extract, but still I see nothing to warrant the assertion that "this engine is the strongest puller of any pattern ever made." A report of trials made on some other engines, and on other roads, with this same instrument would be full as satisfactory as the praise of some *Master Mechanic* made by the reporter of a local paper.

You would confer a great favor on many of your readers if you could give us some report of other trials of the same kind.

One fact was clearly shown by this trial, that this engine did not have adhesion enough for her full power, and that when the tension was greater than about 14,000 lbs. sand had to be used. The greatest average tension shown was about 18,500 lbs., or 4,500 lbs. more than the engine would exert on a dry rail without the use of sand. The weight on drivers of this engine was 46,700 lbs., or about 3.33 lbs. of adhesion to one of tension; to get the adhesion necessary for the full strength of the engine would require 61,600 lbs. on the driving wheels—too great a weight for two pairs of drivers but about right for three.

These matters are very interesting to the public, especially to those engaged in railway service; and any report of experiments of this kind is eagerly sought after. But when the statistics are coupled with a puff of the local officer of the railway where the experiments were made, it is apt to cause doubts of the reliability of the test.

W.

#### THE SCRAP HEAP.

##### A Passenger Railroad Inclined Plane.

The *Iron Age* says: "On May 17, the Duquesne Inclined Plane opposite the new Point Bridge, at Pittsburgh, was opened to the public, and on the 20th there were 7,000 passengers passed over it. The elevation of this plane is 400 feet, the whole length being 792 feet; the grade is 30 1/2 degrees. The engines at the top of the hill are each 75 horse-power; each car weighs 4 1/2 tons, and is made 7 feet wide by 15 feet in length, with seats for 40 passengers, the trucks being made of rolled beams. The freight compartment of each car measures 6x6x7 feet, and is built beneath the floor of the passengers' room or compartment. The drum and wheel are each 12 feet in diameter, the drum being entirely of cast iron. The boilers (two) are each 42 inches by 24 feet. The bridge is all wrought iron, 362 feet in length, and was built by the American Bridge Company, of Chicago. The highest iron trestle is 71 feet between the masonry and the bottom chord of girders. The machinery was built by J. & J. B. Millholland, of Pittsburgh; the steel cables were made by Broderick & Bascom, of St. Louis, and the woodwork by Kimmel & Rice, of Pittsburgh. The designs for this splendid structure were made by Mr. S. Diescher, civil and mechanical engineer, of Pittsburgh, who superintended the whole work to its completion. The total cost of the work is \$40,000."

##### A New Steam Street Car.

The *Paterson Press* of June 9 says: "A new patent car to be propelled by steam, for use on horse railroads, has just been completed at the Grant Locomotive Works. It is an entirely new plan in the way of a street car. It is to be tested at Riverside on the horse car track on Monday, which trial will be looked forward to with great interest. The car has been in process of construction at the works now for several months, there being no especial hurry for it. It is the carrying out of a new idea; it is a traction engine, with a wheel having the tire covered with rubber in the middle of the car and running along on the rail, and which carries along the car. It is claimed it will run on the rails even if they are covered with thick ice, as long as it has a smooth surface to run over."

##### The Tiffany Refrigerator Car.

The E. Anheuser Co. Brewing Association, of St. Louis, reports of a trip of one of the cars of the Tiffany Refrigerator Car Co. of Chicago, which was sent with a load of beer to Dallas, Tex., that "the beer arrived there in splendid order and condition, more ice left in car than experienced previously, so that our representative was highly pleased, and expressed himself in very flattering terms about your car."

One of the company's cars has been sent to California, the Union Pacific officers inspecting it at Omaha and approving of its construction. The company has now so many orders as to be obliged to require three weeks' notice for large orders, but has made arrangements for a prompt supply.





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## Editorial Announcements.

**Passes.**—All persons connected with this paper are forbidden to ask for passes under any circumstances, and we will be thankful to have any act of the kind reported to this office.

**Addresses.**—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

**Advertisements.**—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns OUR OWN opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

**Contributions.**—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

## COMPANIES' REPORTS.

One of the current complaints against American railroad companies is the lack of frequent, full and exact reports, such as would give their proprietors and creditors—that is, their stock and bond-holders—definite information as to the value of their property and security. This complaint is heard especially abroad, where of late years railroad securities have been a more stable property than here, and where all corporations are required to report yearly or oftener, according to certain definite rules, and stockholders are accustomed to watch their directors and make their own authority felt much more than in this country. Since the great disasters among American railroad properties which have occasioned immense losses in Europe as well as here, the complaints have multiplied. The Englishman who held 10 per cent. shares in 1875, when they were worth 110, and finds now that they are worth but 12, naturally demands that hereafter the affairs of his road should be so reported to him that he may be able to know what its actual financial condition is—what its business, its earnings, and all the obligations which it will have to meet. A great deal has been said on the subject in England recently, as also in this country, but usually the critic merely complains of a lack of the necessary information, and urges the advisability of requiring it; rarely does he state specifically what is necessary information.

This is not the case, however, with the letter addressed to the London Times which we copy this week, and which seems to us the clearest and most definite discussion of the subject that we have yet seen, demonstrating the writer's familiarity with the subject of railroad accounts, and the manner in which they are presented here and abroad, and evincing a clear appreciation of some of the essentials to the protection of stock and bondholders.

Railroad accounts are likely to be looked at in very different ways by different classes of men. There are those, including many professional accountants, who hardly think of them except as a machine to insure the proper collection and disbursement of the revenues of the company according to the instructions of the President and directors. Their great object is attained if they

prevent any embezzlements by officers or employees. The officers who work the road, however, if they are intelligent, progressive men, are apt to look upon accounts chiefly as records of facts giving the results of all their operations in detail, so that they may know the results in each case: whether work done in this way was more expensive than similar work done in another way—what are the details of the expenses of every process under all circumstances. They use accounts chiefly to base their operations on, and they want hundreds of things that may be quite unimportant so far as the proper collection and disbursement of the revenues are concerned. That is, they need a great many statistics together with the accounts.

The railroad proprietor is of course interested in having the strictest honesty enforced in collecting and disbursing his revenues; and also in having those who work his road supplied with all the information that may be useful to them; but he needs special information to enable him to know just what his directors have been doing, what his property consists of, and all the changes in it; what it has earned and just what has been done with the money; what debts and other obligations, positive or contingent, have been incurred, and when these debts fall due. That is, while the managers desire to keep a check on their subordinates by the system of accounts, the stockholders desire to keep a check on their directors.

The letter copied from the London Times, which is signed with the initials of a prominent English railroad director (Mr. John M. Douglas), calls attention to great powers of American directors which are denied to directors of English companies. The American stockholder who has appointed a little body of men to manage his business may see them engage him in another business without his knowledge or consent, or cause him, substantially, to invest in another and very different property from that which his stock originally represented, or involve him in new debts and other obligations. At the beginning of the year, when he chose his directors, having a thousand shares in a railroad a hundred miles long between two cities he was a partner in the business of a common carrier between those places, having, say, a fiftieth interest in the business. But meanwhile his directors bought a coal mine, and contracted for the construction of an extension a hundred miles long, and for the lease of two connecting lines of similar length, and issued several millions of dollars of new bonds, and also increased the capital stock. At the end of the year the investor finds himself a miner as well as a carrier, with a much smaller proportion of a very different business from that which he began the year with, and moreover with a great mass of debts and perhaps contingent obligations which may destroy the value of the interest in the property which he preserves. He began with a business; within a year, without any action on his part, he finds himself involved in a gigantic speculation.

And yet, as the Times correspondent points out, the most conservative companies have found it dangerous to deprive their directors of the great power of issuing new stocks and bonds, contracting for extensions, leases, and guarantees, and buying coal lands and other similar property. They would prefer to submit all such questions to the decision of the stockholders at a meeting called for the purpose; but so long as their competitors are able to act promptly and secretly, they feel it necessary to their protection that they too shall preserve that power. And this is at the bottom of nine-tenths of the secrecy in railroad management. Each can afford to be frank and open if all the rest are, but plots must sometimes be fought by plots, and a company's interests may be endangered if it is more limited in the exercise of power than are its competitors.

To insure anything like accuracy in company returns, it is important first that an inventory of the property be submitted, and that this inventory be made or checked by experts entirely independent of the management. This would be a formidable affair if an inventory had to be made from the beginning every year, but when once an inventory has been made, a comparatively slight examination will show the changes made in it in a single year. This is especially necessary for the equipment and working stock of supplies of a company, in which great changes in values or quantities may be made within a year—enough to make the difference of a dividend or no dividend on the shares of the company. Another requirement is that the accounts should be audited by experts also independent of the management.

Railroad directors are placed in a peculiar position. As things are, they are the first to be informed of whatever affects the value of the company's securities. The temptation is great then for them to use this knowledge to their own advantage—to sell out their shares if the prospect is unfavorable and to buy if it is favorable—before the information becomes public. Too often they use this special information not merely as an investor would, but to speculate in the shares of the company, thus playing their games with loaded dice. There seems to be no way to prevent this except by de-

stroying the advantage of peculiar information by making public as soon as possible such facts as are essential to a knowledge of the value of the property. It may be true that a company could not now safely adopt this policy, but this does not prove that there would be any serious disadvantage in it if it were required of all companies. It would be unsafe for one of the great European powers to disband its standing army, but if all these armies were disbanded the countries would probably be quite as safe as they now are, while the largest part of their national expenses would be avoided.

A shareholder is a partner in an enterprise, and is entitled to have information of its affairs. This he cannot have by personal inspection of the books, as a member of a firm can, because of the great number of the partners and the complexity of the business. But he is entitled to a substitute for this right, which will let him know what his agents are doing and who his partners are. The difficulties in the way of providing for this are well set forth in the letter to the Times, and they are practical and not easy to remove. Stockholders themselves are likely to protest against a law which would compel the Baltimore & Ohio Railroad Company to publish certain details desirable to be known concerning its business, if at the same time the Pennsylvania could keep its affairs secret and take advantage of the information supplied by its rival. That is, an effective system should be general and not special, national, not sectional, and it is questionable whether there is any national authority to legislate on the subject.

## Five Months' Traffic.

During the early part of 1876 there was so large a movement of leading staples over the railroads as to appear like a revival of the transportation industries if of no other. Making a general statement of business for the first four months of the year we found that, compared with the corresponding period of 1875, there had been an increase of nearly 22 per cent. in the receipts of grain at Atlantic ports, of 21 per cent. in the anthracite coal movement, of nearly 20 per cent. in petroleum exports, and of 30 per cent. in cotton receipts. These are the chief productions of the country concerning which we have current statistics. The condition a year ago, then, was certainly a great improvement over that at the same date in 1875. It was indeed decidedly good, so far as most of these staples of traffic are concerned, but the comparison with 1875 exaggerated the favorable condition of things, because 1875 was an unusually bad year, with especially a very limited movement in the winter months. On this account we cautioned the reader last year against taking too favorable a view of the condition of things.

Now, making a similar examination of the course of traffic for the first five months of 1877 (one month more than the period mentioned above for 1876), we need to repeat the caution, but for a different reason. The comparison with 1876 is in some important respects unfavorable; but if we bear in mind that in the first part of 1876 there was an unusually large traffic, we may conclude that this year has not after all been worse than the average even in the staples of grain and cotton. The unusually favorable winter of 1876, when there was a larger traffic than ever before, probably, was followed by an unfavorable one this year, with little traffic offering, and, for a time, great obstacles to carrying it.

Below are the comparisons of movements of leading staples for the first five months of 1877 and 1876:

|                                       | 1877.       | 1876.       | Inc. or Dec.    | P. c. |
|---------------------------------------|-------------|-------------|-----------------|-------|
| Grain receipts at seaboard, bush..... | 46,541,381  | 58,026,017  | Dec. 11,478,636 | 11.0  |
| Cotton receipts, bales.....           | 1,343,580   | 1,677,328   | Dec. 333,748    | 20.0  |
| Anthracite coal production, tons..... | 7,696,479   | 5,888,673   | Inc. 1,807,806  | 30.6  |
| Petroleum exports, gallons.....       | 114,522,181 | 83,424,515  | Inc. 31,097,666 | 37.3  |
| Chicago lumber shipments, ft.....     | 170,915,664 | 163,208,462 | Inc. 7,707,202  | 4.7   |

We have added here the lumber shipments of a single port to the staples of traffic which we usually give. If this lumber movement could be given for all the leading shipping ports, it would be very valuable, as significant to a great extent of the prosperity of the Northwest and especially of Northwestern farmers. Lumber is the chief freight westward of the railroads which extend from Lake Michigan westward, and its consumption is pretty nearly in proportion to the growth and prosperity of the prairie country. However, we cannot base a judgment upon the condition of the lumber trade of Chicago alone, though it has much the largest business in this staple.

The grain movement, though so much less than in 1876, was somewhat greater than in 1875. The cotton receipts are a fifth less than last year, but for the whole crop year they have not been small but positively large, the crop marketed the preceding year having been the largest ever known, and that of 1876, though considerably smaller, was still above the average. The anthracite production last year, though much larger than in 1875, was still not very large; that of this year, however, is probably the largest on record. If it is possible for it to continue, it will supply an enormous traffic to several railroads, and though it may not be a profitable traffic to the roads chiefly con-



earned, it will yet make a demand on the industries engaged in supplying the railroads to almost as great an extent as if the profits were five times as great. The petroleum exports, as we have recently had occasion to note, have been simply enormous, and much greater than ever before. Here the large percentage of increase hardly does justice to the growth of the traffic, for last year also there was a considerable increase over the exports of the preceding year.

A more accurate idea of the course of traffic may be had by following the movement for a series of years, as is done below, where the column headed "Grain" is for bushels of grain received at Atlantic ports for the first five months of the years named, that headed "Cotton" for bales of cotton received at the seaboard, "Coal" for tons of anthracite coal produced, and "Petroleum" for the exports of that material in gallons:

Course of Traffic for Five Years.

| Year. | Grain.     | Cotton.   | Coal.     | Petroleum.  |
|-------|------------|-----------|-----------|-------------|
| 1873. | 31,535,735 | 1,888,222 | 7,979,634 | 86,159,135  |
| 1874. | 50,208,341 | 1,627,391 | 7,731,625 | 76,743,650  |
| 1875. | 41,374,920 | 1,207,897 | 5,888,673 | 83,424,515  |
| 1876. | 58,020,017 | 1,343,580 | 7,096,479 | 114,522,181 |
| 1877. | 46,541,381 | 1,488,884 | 5,261,682 | 88,000,878  |

The grain receipts, then, are this year 2 per cent. above the average, the cotton receipts 10 per cent. below, the coal 46 per cent. above, and the petroleum 30 per cent. above.

Thus, the traffic this year has not been light, though on the whole lighter than last year. The falling off in grain, however, is severely felt, for it is the bulkiest of the products which are carried great distances. The anthracite coal has been this year six or seven times as much as the grain in weight, but anthracite does not often go in large quantities more than 500 miles by rail, while a great deal of the grain arriving on the Atlantic pays freight over 1,000 to 1,500 miles of railroad.

The prices, meanwhile, have been for most of the time quite satisfactory to the producers of grain, and part of the time very much so to the petroleum producers. Cotton has been low, and anthracite coal, it would appear, is hardly paying the cost of getting it out and carrying to market.

The prospects ahead depend largely on two very uncertain events:—the crops yet to mature and the continuance of the European war. With simply an ordinary wheat crop in the Northwest and a continuance of the war, there is likely to be a heavy grain movement in the fall. The war, however, checks the demand for cotton. Anthracite, it seems certain, must come forward more slowly hereafter for lack of a market, though probably considerably more will be consumed than in the recent years of high prices. Petroleum seems a law unto itself. In these days of enormous production the price is not low; but sometimes the price falls enormously within a few weeks without, apparently, stimulating consumption in the slightest degree. A dollar a barrel for crude at Parker's has sometimes been the price, and last year for a time it was \$4.50. This year it opened at about \$3.50 and has gone down since to \$2.20, apparently leaving the business still profitable. Rates on petroleum, however, are likely to be weak if the present great diversion of the traffic continues, and rates must continue to be low on grain, as the vessels are carrying it for the merest trifle of a recompense.

#### Grain Receipts and Exports of Seaboard Cities.

Last week, in connection with a statement of the movement of grain from the Northwest by lake and rail since navigation opened, we made a statement of the distribution of receipts at Atlantic ports for this year, before and since navigation opened. We now present the figures for the seven weeks since navigation opened (April 15 to June 2), but this time for 1876 as well as the current year.

Atlantic Grain Receipts since Navigation Opened.

|                        | 1877.      |       | 1876.      |       |
|------------------------|------------|-------|------------|-------|
| April 15 to June 2—    | Bushels.   | P. c. | Bushels.   | P. c. |
| New York .....         | 7,170,822  | 36.9  | 12,098,959 | 46.3  |
| Boston .....           | 1,586,178  | 8.2   | 1,966,545  | 7.3   |
| Portland .....         | 171,464    | 0.9   | 376,169    | 1.4   |
| Montreal .....         | 1,153,051  | 5.9   | 1,707,396  | 6.5   |
| Philadelphia .....     | 2,942,790  | 15.2  | 5,381,500  | 20.6  |
| Baltimore .....        | 4,834,490  | 24.9  | 3,864,285  | 14.8  |
| New Orleans .....      | 1,542,908  | 8.0   | 821,520    | 3.1   |
| Total, for seven weeks | 19,401,708 | 100.0 | 26,156,374 | 100.0 |

It appears, then, that while New York's proportion of receipts has increased considerably since navigation opened (it was 29.3 per cent. for the 15 weeks before) this year, it is still largely below the proportion of last year. It is apparently recovering its position, however, as the proportions received for the later weeks, which were the largest of the year, are more largely in favor of New York, rising for the last week reported to 47 per cent. New York, however, was doing better than this last year, its proportion of the total receipts having been for each of seven weeks since navigation opened as follows, for the two years:

| Week ending— | 1877. | 1876. |
|--------------|-------|-------|
| April 21.    | 31    | 40%   |
| April 28.    | 29%   | 38%   |
| May 5.       | 33    | 41    |
| May 12.      | 29%   | 46    |
| May 19.      | 38    | 44%   |
| May 26.      | 45%   | 52%   |
| June 2.      | 47    | 54    |

The decline is thus most marked in the earlier weeks, when the arrivals by water at New York were confined chiefly to grain which had been in store at Buffalo, and before there were free arrivals by the lake vessels. The latter have shown that they are likely to take most of the grain destined for

export, and if there were as much grain to come forward as there was last year, doubtless New York would show a great gain. But against this effect of the cheap water route is the light supply to come forward. Most of the grain is needed for home consumption, and no cheapness of the water route can divert this from one port to another. There is, then, not the opportunity to attract grain by special advantages in expenses of shipment and handling and merchants' charges that exists when exports are large.

The exports from the four chief Atlantic ports, as compiled by Mr. E. H. Walker, Statistician of the New York Produce Exchange, have amounted for five months of this year to 769,549 barrels of flour and 30,076,523 bushels of wheat and corn. These were distributed among the four ports as follows:

|                   | Flour.   |       | Wheat.    |       | Corn.      |       |
|-------------------|----------|-------|-----------|-------|------------|-------|
|                   | Barrels. | P.c.  | Bushels.  | P.c.  | Bushels.   | P.c.  |
| New York.....     | 529,924  | 68.9  | 3,671,468 | 94.7  | 8,119,234  | 31.0  |
| Philadelphia..... | 33,906   | 4.4   | 95,905    | 2.5   | 5,519,211  | 21.1  |
| Baltimore.....    | 126,503  | 16.4  | 106,946   | 2.8   | 11,137,795 | 42.5  |
| Boston.....       | 79,216   | 10.3  | 507       | ....  | 1,425,437  | 5.4   |
| Total.....        | 769,549  | 100.0 | 3,874,826 | 100.0 | 26,301,697 | 100.0 |

If we reduce flour to grain in the usual way, counting a barrel of flour equivalent to five bushels of wheat, we will have as the equivalent bushels exported from each port:

|              | Bushels.   | P. c. |
|--------------|------------|-------|
| New York     | 14,440,322 | 42.6  |
| Philadelphia | 5,745,446  | 17.0  |
| Baltimore    | 11,877,256 | 35.0  |
| Boston       | 1,822,044  | 5.4   |
| Total        | 33,924,268 | 100.0 |

The season has been an unfavorable one for New York because of the very small wheat exports, a business which belongs to it peculiarly. Baltimore has before surpassed it in corn exports, in 1876 exporting a quarter more than New York.

In 1876, for the whole year, New York's exports were 51 per cent. of the total from these four ports; in 1875 they were 68 per cent.; in 1874, 75 per cent.; in 1873, 77 per cent. The early months of the year, however, are more favorable to the other ports named than to New York, which has the advantage of a water route, and so has a large addition to its supply for exports while navigation is open.

#### The Fast Trains.

The fast trains between Chicago, St. Louis and New York, are now in full blast. The Lake Shore and the Pittsburgh, Fort Wayne & Chicago each run a train through from Chicago to New York in 24½ hours, and the Lake Shore train is extended to Boston by the Boston & Albany from Albany and the Hoosac Tunnel Line from Schenectady. The Wabash fast train from St. Louis to New York in 35 hours is met by a train put on by way of the Vandalia Line and Pittsburgh, which makes the run in 34½ hours. A fast train from Cincinnati has also been put on by the Pittsburgh, Cincinnati & St. Louis.

The epidemic has spread southward and a train to run from New York to New Orleans in 60 hours by way of Richmond, Charlotte and Atlanta, has begun running. A similar train has also been put on over the Coast Line, by way of Wilmington and Columbia, which makes the same time.

The St. Louis, Iron Mountain & Southern and its connections have increased the speed of their trains so as to reduce by nearly five hours the time between St. Louis and Galveston.

When the Lake Shore announced its fast train to leave Chicago at 1:30 p. m. and reach New York at 7 p. m. the next day, some two and a half hours ahead of the Fort Wayne train leaving Chicago at 4:20 p. m., the latter road met it very neatly by shortening the time of its train so as to arrive as early as the Lake Shore train while leaving at 4:20 p. m. as before. Then the Lake Shore adopted a similar schedule and made its train leave at 4:40 p. m., with the same arriving time at New York. This makes the actual time between New York and Chicago about 25½ hours, giving an average speed over the Lake Shore route of about thirty-eight miles per hour, which is as lively as need be. The trains as now run are quite convenient for the public, taking the place of the Atlantic express, which has always had the largest share of the through travel from Chicago, and has left at 5:15 p. m. The Fort Wayne's time was a little too early for connections with some of the Western roads, but most of the incoming trains are in time for it and all of them in time for the Lake Shore, we believe, whose time very likely has been adopted by the Fort Wayne by this time. The Michigan Central has refused to go into the fight. It will be curious to know to what extent its business will be affected by the quicker time of its competitors. You can now leave Chicago at 4:40 one afternoon, and reach New York in time to go to the theatre the next night—and do it for \$15. The sleeping car companies ought to protest against this, as the passenger needs a berth but one night, instead of two, as formerly.

The hour of starting is likely to make the fast train the largest on the roads, and we should suppose, very hard to handle at that speed with a single engine. This increases the cost of the train, which is, perhaps, a good thing under the circumstances.

The companies are not at all anxious to keep up the train. Hardly was the Lake Shore train put on before negotiations began to settle the trouble and return to the old speed. A meeting was held in New York Tuesday which was not successful, but the negotiations were resumed Wednesday, but not concluded in time for us to announce the result if there was any.

#### Record of New Railroad Construction.

This number of the Railroad Gazette has information of the laying of track on new railroads as follows:

Portland & Ogdensburg.—On the Vermont Division track from Swanton, Vt., southeast is extended 15 miles, to East Fairfield.

Colchester.—Completed from the Boston & New York Air Line to Colchester, Conn., 5 miles.

Syracuse, Geneva & Corning.—Track laid from Corning, N. Y., north 14 miles.

Paulinskill Valley.—Completed from Blairstown, N. J., southwest to Delaware Station, 10½ miles.

East Berlin Branch.—Completed by laying 4 miles of track to East Berlin, Pa.

Wheeling & Lake Erie.—The first track is laid from Norwalk, O., north to Milan, 5 miles. It is of 3-ft. gauge.

Cincinnati & Eastern.—Extended from Mount Oreb, O., east to Sardinia, 7 miles. It is of 3 ft. gauge.

Decatur, Mattoon & Southern.—Track on this road (late the Grayville & Mattoon) is extended from Newton, Ill., north by west 30 miles.

Wisconsin Central.—Completed by laying track from Butter-nut Creek, Wis., north to Chippewa River, 12 miles.

Denver & Rio Grande.—Track on the La Veta Branch is extended 7 miles to the summit on the Sangre de Christo Range. It is of 3 ft. gauge.

This is a total of 109½ miles of new railroad, making 570 miles completed in the United States in 1877, against 628 miles reported for the corresponding period in 1876, 296 in 1875, 537 in 1874, and 1,181 in 1873.

#### Railroad Conventions.

Annual conventions of railroad associations will be held as follows:

The Railroad Purchasing Agents' Association of the United States and Canada will hold its fourth annual meeting at the Kennard House in Cleveland, O., June 19 and 20, 1877.

A number of subjects have been named for discussion; a full attendance is looked for, and the meeting will be interesting and profitable to all who will attend.

The present officers of the Association are: Col. J. F. Sterling, President; A. C. Armstrong and Allan Bourn, Vice-Presidents, and A. G. Thompson, Secretary and Treasurer.

The Southern Railway and Steamship Association will hold a convention at the St. Nicholas Hotel, New York, beginning at 1 p. m. Wednesday, June 27, to which are invited not only officers of companies in the Association, but also those of other companies interested in the freight business of the South and Southwest.

#### THE MISSOURI TRAIN-WRECKERS HAVE BEEN ARRESTED.

One of them confesses that they had plotted to wreck the train in order to have an opportunity of robbing the passengers under pretence of aiding the wounded. It remains to be seen whether these miscreants will receive the punishment justly due their most atrocious crime. Within a few years there have been several such attempts, some of them successful, at robbing trains, and more of them resulting in the murder of train-men, and so far we believe that the perpetrators have all gone without punishment. More of these cases have been in Missouri than in any other State. Doubtless the impunity with which such crimes have been committed has made an impression on the criminal classes. Ordinary highway robbery is a somewhat dangerous business: coupled with murder it is very dangerous. But the wholesale highway robbery and murder of train-wrecking seems to be about the safest of the criminal "industries." In this last instance, at Woodend, the perpetrators seem to have been for the most part amateurs in crime, choosing for their first step this wholesale slaughter simply because it seemed safe and easy. And we must expect a repetition of such crimes, and even an increase in their frequency, unless it is proved, in a signal and terrible manner, that, however easy they may be, they are not safe. To do this it is proper that the ordinary forces of the community engaged in detecting crime, and collecting evidence and prosecuting criminals, be supplemented by the powerful aid of the railroad companies—not alone of the company most directly interested; that is a matter of course—but of all the companies. They owe it to their patrons and to their own interests to prove that train-wrecking is a crime almost sure to be followed by punishment as dire as the laws provide. They can do this by taking measures to follow the perpetrators relentlessly until they are apprehended, even if it requires years of time and the expenditure of more money than the whole train was worth. It will not do to let such matters go. If train-wrecking continues to be the comparatively safe occupation it has been, it is sure to become more and more frequent. Criminals are not deterred by any degree of atrocity in crime, but only by its probable results to themselves. Fortunately, those engaged in the last attempt, resulting in the murder of three men, quickly fell into the hands of the law. Let us hope that in this case the punishment will be signal and prompt.

THE TRUNK LINE POOL is expected to go into effect July 1, if nothing happens. A contract has been signed by the four companies concerned, but it seems to be doubted whether it is yet sufficiently definite and detailed to permit of execution without further development. All seem anxious to have it succeed, however, and if it does not it will probably be because they do not know how, which, considering the novelty and complexity of the subject and the general lack of experience in these matters, will not be a matter for surprise. But an imperfect plan, as a first plan is almost sure to be, if provision is made for its modification and development, and its execution is intrusted to a capable mind which will watch its operation, detect its defects and study to improve it, may be expected to result in something positively good.

#### OUT WEST.

##### IV.

#### CHICAGO.

The report of representatives of manufactures of railroad supplies who are "out" among Western railroad men is that "business at the East is better than in the West." Whether this truly represents the condition of things in the West it is of course difficult to know certainly, but in the operating de-







Kenosha, Wis.; David Dows, Sidney Dillon, John M. Burke, New York. Messrs. Dows, Howe and Dillon are re-elected; Messrs. Hughitt and Burke succeed Oliver Ames, deceased, and A. B. Baylis. The board re-elected Albert Keep President; M. L. Sykes, Jr., Vice-President, Secretary and Treasurer; Marvin Hughitt, General Manager.

The full board is now as follows: Marvin Hughitt, Wm. H. Ferry, H. H. Porter, Albert Keep, Chicago; James H. Howe, Kenosha, Wis.; W. L. Scott, Erie, Pa.; David Dows, Sidney Dillon, John M. Burke, Harvey Kennedy, S. M. Mills, John Bloodgood, A. G. Dulman, M. L. Sykes, Jr., R. P. Flower, Jay Gould, New York; J. L. Ten Have, Frzn., Amsterdam, Holland.

**Baltimore & Potomac.**—At the annual meeting in Baltimore, June 6, the old board was re-elected as follows: Samuel Cox, Charles County, Md.; Dr. Eli J. Henkle, Anne Arundel County, Md.; Oden Bowie, B. F. Newcomer, George Small, Wm. T. Walters, Baltimore; A. J. Cassatt, George B. Roberts, Philadelphia. The board re-elected Oden Bowie, President; A. J. Cassatt, Vice-President; John Crowe, Secretary and Auditor; John S. Leib, Treasurer.

**Western of Minnesota.**—At the annual meeting in St. Paul, June 6, the following directors were chosen: George L. Becker, Alexander Ramsay, N. W. Kittson, A. E. Reed, F. R. Delano, St. Paul, Minn.; B. E. Neiler, C. A. Pillsbury, D. Morrison, W. McNair, Minneapolis, Minn.; C. A. Gilman, St. Cloud, Minn.; Frederick Billings, Woodstock, Vt.; O. B. Wright, Philadelphia; George Stark, New York.

**Fort Wayne, Muncie & Cincinnati.**—At the annual meeting in Fort Wayne, Ind., June 5, the following directors were chosen: R. G. Bolston, New York; George W. Baldwin, J. Henry Brooks, John A. Burnham, Charles H. Dalton, John M. Forbes, H. H. Hunnewell, Wm. G. Means, H. L. Russell, Elijah Smith, George Tyson, Boston.

**Newport & Mayville.**—The new board has elected Alfred Gaither President; M. Hay, Secretary; G. C. Goss, Treasurer.

**International Telegraph.**—At the annual meeting in Portland, Me., June 5, the following directors were chosen: J. S. Bedlow, A. D. Brown, J. B. Foster, W. E. Gould, Frank Jones, B. M. Pulsifer, George F. Shepley; Clerk and Treasurer, A. D. Brown.

**Flint & Pere Marquette.**—At the annual meeting in East Saginaw, Mich., June 6, the following directors were chosen: Wm. L. Webber, H. C. Potter, East Saginaw, Mich.; John H. Prentiss, Chicago; Philo Remington, H. H. Fish, Utica, N. Y.; Wm. W. Crapo, Alexander Seabury, Edward D. Mandell, New Bedford, Mass.; Jesse Hoyt, New York. The new directors are H. H. Fish and E. D. Mandell, who succeed Charles B. Tucker, deceased, and O. W. Potter.

**Canada Southern.**—The annual meetings of the leased and controlled companies were held in Grosse Ile, Mich., June 7, and the following directors chosen: *Canada Southern Bridge Co.*—S. F. Barger, J. W. Converse, Sidney Dillon, James Emmett, Augustus Schell, W. L. Scott, Wm. H. Vanderbilt, E. A. Wickes, E. D. Worcester. *Chicago & Canada Southern.*—Elisha Atkins, A. J. Aiken, J. W. Converse, Sidney Dillon, David Dows, Charles Lanier, W. B. Leonard, A. L. Pritchard, E. A. Wickes. *Toledo, Canada Southern & Detroit.*—S. F. Barger, S. W. Davis, Sidney Dillon, Joseph Harker, Augustus Schell, W. L. Scott, Wm. H. Vanderbilt, E. A. Wickes, E. D. Worcester.

**International & Great Northern.**—Mr. O. H. Dorrance has been appointed Master of Transportation. All train-men, yard-men, engineers when not in the shop, and telegraph operators, will report to him and be subject to his authority. Station-masters will respect his directions.

**Vermont & Massachusetts.**—At the annual meeting, June 5, the following directors were chosen: Edward L. Davis, James A. Dupree, George F. Faye, Francis Goodhue, Wm. H. Hill, Daniel S. Richardson, Thornton K. Ware. The road is leased to the Fitchburg Company.

**Canada Southern.**—At the annual meeting in St. Thomas, Ont., June 6, the following directors were chosen: Hon. Adam Crooks, Toronto, Ont.; W. L. Scott, Erie, Pa.; Samuel F. Barger, Sidney Dillon, Augustus Schell, Wm. H. Vanderbilt, Wm. E. Vanderbilt, E. A. Wickes, E. D. Worcester, New York. The only new director is Wm. K. Vanderbilt, who succeeds Joseph Harker. The board elected Wm. H. Vanderbilt, President.

**Franklin Telegraph.**—At the annual meeting in Boston, June 6, the following were chosen: Directors, Frederick Ames, Edward F. Atkins, Sidney Dillon, Thomas T. Eckert, Jay Gould, James P. Keene, John H. Mortimer, W. J. Syme, Henry M. Taber; Clerk, James G. Harris; Treasurer, Albert B. Chandler.

**Central Vermont.**—Mr. Otis Drury, of Boston, has been chosen a director to fill the vacancy caused by the resignation of John Q. Hoyt, of New York.

**Chicago, Milwaukee & St. Paul.**—At the annual meeting in Milwaukee, June 9, the following directors were chosen: Alexander Mitchell, John Plankinton, S. S. Merrill, Milwaukee; Jonathan M. Bowman, Kilbourne City, Wis.; Selah Chamberlain, Cleveland, O.; Julius Wadsworth, John M. Burke, Walter B. Gurnee, Peter Geddes, David Dows, Abraham R. Van Nest, Jeremiah Milbank, New York; George W. Weld, Boston. The only new director is General Manager Merrill, who succeeds J. G. Thorp. The board re-elected Alexander Mitchell President; Julius Wadsworth, Vice-President; S. S. Merrill, General Manager; John C. Gault, Assistant General Manager; R. D. Jennings, Secretary and Treasurer.

**Illinois Railroad Commission.**—Mr. M. H. Chamberlain, a lawyer of Cass County, has been appointed Secretary of the Illinois Railroad Commission. Mr. Chamberlain was a candidate for Congress from his district in 1872.

**Pennsylvania Company.**—At the annual meeting in Pittsburgh, June 5, the following directors were chosen: J. N. McCullough, Thomas D. Messler, Wm. Thaw, Pittsburgh; Alexander Biddle, G. Morrison Coates, J. N. Du Barry, S. M. Felton, H. H. Houston, Wistar Morris, H. M. Phillips, George B. Roberts, Thomas A. Scott, Philadelphia.

**Chicago, Rock Island & Pacific.**—At the annual meeting in Chicago, June 6, the following directors (one-third of the board) were chosen: F. L. Ames, Easton, Mass.; A. G. Dulman, B. P. Flower, Benjamin Brewster, New York. Messrs. Ames and Dulman are re-elected; Messrs. Flower and Brewster succeed Harvey Kennedy and James R. Cowing. The board re-elected Hugh Riddle President; David Dows, Vice-President; Francis H. Tows, Secretary and Treasurer.

The full board is now as follows: R. B. Cable, Rock Island, Ill.; Hugh Riddle, H. H. Porter, Chicago; W. L. Scott, Erie, Pa.; F. L. Ames, Easton, Mass.; Charles R. Marvin, A. G. Dulman, David Dows, Francis H. Tows, R. P. Flower, Benjamin Brewster, Sidney Dillon, Jay Gould, New York.

**Chicago & Northwestern.**—At the annual meetings in Chicago, June 7, the following directors and officers were chosen for this company's leased and controlled lines: *Chicago & Milwaukee.*—Directors, Albert Keep, J. H. Howe, David Dows, Marvin Hughitt, A. G. Dulman, M. L. Sykes, Jr., H. H. Porter, Wm. H. Ferry, J. B. Redfield; President, Albert Keep; Vice-President, Secretary and Treasurer, M. L. Sykes, Jr.; Assistant Secretary, J. B. Redfield. *Egin & State Line.*—Directors, Albert Keep, J. H. Howe, David Dows, A. G. Dulman, M. L. Sykes, Jr., H. H. Porter, Wm. H. Ferry, J. B. Redfield; President, Albert Keep; Vice-President, M. L. Sykes, Jr.; Secretary and Treasurer, J. B. Redfield. *State Line & Union.*—Directors, Albert Keep, J. H. Howe, David Dows, A. G. Dulman, M. L. Sykes, Jr., H. H. Porter, Wm. H. Ferry, Marvin Hughitt, J. B. Redfield; President, Albert

Keep; Vice-President, M. L. Sykes, Jr.; Secretary and Treasurer, J. B. Redfield. *Memmonese River.*—Directors, Albert Keep, Wm. H. Ferry, M. L. Sykes, Jr., Marvin Hughitt, H. H. Porter; President, Wm. H. Ferry; Vice-President, Marvin Hughitt; Secretary, J. B. Redfield; Treasurer, M. M. Kirkman. *La Crosse, Trempealeau & Prescott.*—Directors, Albert Keep, J. H. Howe, David Dows, A. G. Dulman, C. R. Marvin, M. L. Sykes, Jr., H. H. Porter, Wm. H. Ferry, M. M. Kirkman; President, Albert Keep; Vice-President, Secretary and Treasurer, M. L. Sykes, Jr.; Assistant Secretary, J. B. Redfield. *Winona & St. Peter.*—Directors, Albert Keep, J. H. Howe, David Dows, A. G. Dulman, Marvin Hughitt, M. L. Sykes, Jr., H. H. Porter, Wm. L. Scott, Wm. H. Ferry; President, Albert Keep; Vice-President and Treasurer, M. L. Sykes, Jr.; Secretary, S. O. Howe; Assistant Secretary, J. B. Redfield.

**Concord.**—At the annual meeting in Concord, May 29, the following directors were chosen: Onslow Stearns, Concord, N. H.; Samuel N. Bell, Frederick Smyth, Manchester, N. H.; Jas. W. Johnson, Enfield, N. H.; Joseph P. Pitman, Laconia, N. H.; John E. Lyon, John A. Burnham, Boston. There is no change from last year.

## PERSONAL.

—Mr. Max Hjortsberg, Chief Engineer of the Chicago, Burlington & Quincy Railroad, has been appointed Commissioner of Lincoln Park, Chicago, by the Governor of Illinois.

—Mr. Wm. H. Vanderbilt reached New York on the steamer Britannic June 10, on his return from his short trip to England. He was met in the lower bay by a steamboat with a number of his friends on board.

—Mr. H. A. Blood, formerly Manager of the Boston, Clinton, Fitchburg & New Bedford Railroad, filed a petition in bankruptcy June 11. His liabilities are stated at \$1,528,310.48, chiefly for money borrowed; his assets, a large part of which are hypothecated to secure loans, are chiefly railroad securities, and their par value is \$1,310,600, but this is probably very much above their present value. Mr. Blood's embarrassments arise chiefly from his railroad operations. He has been Mayor of Fitchburg and was at one time considered a rich man.

—Mr. Solomon H. Howe, late President of the Boston, Clinton, Fitchburg & New Bedford Company and partner in a large Boston dry goods house, is reported to be in embarrassed circumstances, his troubles resulting from his connection with the road. He has just filed a petition in bankruptcy, like his former colleague, Mr. Blood.

—Capt. Lewis H. Keno, who first undertook the shipment of Pittsburgh coal down the Ohio River, died in Allegheny City, Pa., June 9, aged 79 years. His first shipment was made in 1820, when he went to Louisville with two flat-boats carrying 8,000 bushels each. He had been incapacitated for active business by ill health for several years past.

## TRAFFIC AND EARNINGS.

## Railroad Earnings.

Earnings for various periods have been reported as follows:

| Year ending Dec. 31: | 1876.     | 1875.     | Inc. or Dec. | P. c.        |
|----------------------|-----------|-----------|--------------|--------------|
| Baltimore & Potomac  | \$722,486 | \$678,092 | Inc.         | \$44,394 6.5 |
| Expenses.....        | 600,205   | 550,013   | Inc.         | \$50,192 9.1 |
| Net earnings.....    | \$122,281 | \$128,079 | Dec.         | \$5,798 4.5  |
| Earnings per mile.   | 1,853     | 7,571     | Inc.         | 482 6.5      |
| Per cent. of exps..  | 85.07     | 81.11     | Inc.         | 1.96 2.4     |

| Year ending March 31:                | 1876-77.  | 1875-76.    | Inc. or Dec. | P. c.          |
|--------------------------------------|-----------|-------------|--------------|----------------|
| Cincinnati, Ham. & Dayton.....       | \$946,921 | \$1,147,753 | Dec.         | \$200,832 17.5 |
| Cincinnati, Ham. & Indianapolis..... | 393,521   | 427,525     | Dec.         | 34,004 8.0     |
| Cin., Richmond & Chicago.....        | 185,745   | 221,117     | Dec.         | 35,372 16.0    |
| Dayton & Michigan.....               | 905,685   | 1,079,385   | Dec.         | 173,700 16.1   |

| Year ending May 31:             | 1876.     | 1875. | Inc. or Dec. | P. c. |
|---------------------------------|-----------|-------|--------------|-------|
| Boston & New York Air Line..... | \$178,351 | ..... | .....        | ..... |
| Expenses.....                   | 127,038   | ..... | .....        | ..... |
| Net earnings.....               | \$51,313  | ..... | .....        | ..... |
| Earnings per mile.              | 3,303     | ..... | .....        | ..... |
| Per cent. of exps..             | 71.23     | ..... | .....        | ..... |

Five months ending May 31:

|  | 1877.     | 1876.     |      |               |
|--|-----------|-----------|------|---------------|
| Atchison, Topeka & Santa Fe.....               | \$844,347 | \$851,874 | Dec. | \$7,527 0.9   |
| Bur., Cedar Rapids & Northern.....             | 359,292   | 488,535   | Dec. | 129,243 26.5  |
| Canada Southern.....                           | 736,046   | 721,873   | Inc. | 14,173 2.0    |
| Central Pacific.....                           | 6,309,000 | 6,380,676 | Dec. | 71,676 1.1    |
| Chicago & Alton.....                           | 1,682,750 | 1,795,718 | Dec. | 112,868 6.3   |
| Chicago, Milwaukee & St. Paul.....             | 2,370,460 | 3,082,733 | Dec. | 712,273 29.1  |
| Denver & Rio Grande.....                       | 248,697   | 163,253   | Inc. | \$95,444 52.4 |
| Illinois Central (Illinois lines).....         | 1,815,255 | 2,168,883 | Dec. | 349,628 16.1  |
| International & Great Northern.....            | 588,390   | 501,845   | Inc. | 86,545 17.2   |
| Missouri, Kansas & Texas.....                  | 1,172,808 | 1,184,212 | Dec. | 11,404 1.0    |
| Missouri Pacific.....                          | 1,484,241 | 1,448,803 | Inc. | 35,438 2.4    |
| St. Louis, Alton & T. H., Belleville Line..... | 202,826   | 198,242   | Inc. | 4,584 2.3     |
| St. Louis, Iron Mt. & Southern.....            | 1,672,291 | 1,466,743 | Inc. | 205,548 14.0  |
| St. Louis, Kan. City & Northern.....           | 1,240,611 | 1,273,163 | Dec. | 32,552 2.6    |
| St. Louis & San Francisco.....                 | 514,764   | 504,698   | Inc. | 10,066 2.0    |
| Toledo, Peoria & Warsaw.....                   | 418,494   | 557,487   | Dec. | 138,993 2.5   |
| Wabash.....                                    | 1,646,037 | 1,729,896 | Dec. | 83,859 4.8    |

Four months ending April 30 :

Four months ending April 30:

|  |           |           |       |          |       |
|--|-----------|-----------|-------|----------|-------|
| Northern.....                              | \$287,687 | \$387,633 | Dec.. | \$99,946 | 25.8  |
| Net earnings.....                          | 63,688    | 110,388   | Dec.. | 46,700   | 42.3  |
| Per cent. of exps..                        | 77.78     | 71.45     | Inc.. | 6.33     | 8.9   |
| Burlington & Mo.<br>River in Nebraska..... | 208,360   | 212,985   | Dec.. | 4,625    | 2.2   |
| Net earnings.....                          | 90,478    | 117,287   | Dec.. | 26,779   | 22.8  |
| Per cent. of exps..                        | 56.87     | 44.94     | Inc.. | 11.73    | 26.1  |
| Cleveland, Mt. Vernon<br>& Delaware.....   | 112,662   | 117,092   | Dec.. | 5,030    | 4.3   |
| Net earnings.....                          | 20,043    | 22,681    | Dec.. | 2,638    | 11.6  |
| Per cent. of exps..                        | 81.96     | 80.52     | Inc.. | 1.44     | 1.7   |
| Denver Pacific.....                        | 97,225    | .....     | ..... | .....    | ..... |
| Net earnings.....                          | 59,063    | .....     | ..... | .....    | ..... |
| Per cent. of exps..                        | 39.30     | .....     | ..... | .....    | ..... |
| Kansas Pacific.....                        | 845,841   | 878,018   | Dec.. | 32,177   | 3.7   |
| Net earnings.....                          | 347,137   | 284,499   | Inc.. | 62,638   | 22.9  |
| Per cent. of exps..                        | 58.91     | 67.60     | Dec.. | 8.69     | 12.9  |
| Nash, Chattanooga<br>& St. Louis.....      | 564,968   | 614,652   | Dec.. | 49,744   | 8.1   |
| Net earnings.....                          | 236,297   | 241,099   | Dec.. | 14,802   | 6.1   |
| Per cent. of exps..                        | 59.91     | 60.77     | Dec.. | 0.84     | 1.4   |
| Paducah & Memphis.....                     | 57,275    | 76,740    | Dec.. | 19,465   | 25.4  |
| Net earnings.....                          | 11,107    | 28,212    | Dec.. | 17,105   | 60.7  |
| Per cent. of exps..                        | 81.00     | 63.02     | Inc.. | 17.98    | 28.5  |
| St. Louis, Iron Mt.<br>& Southern.....     | 1,368,291 | 1,309,405 | Inc.. | 158,886  | 13.1  |
| Net earnings.....                          | 596,956   | 507,654   | Inc.. | 89,302   | 15.6  |
| Per cent. of exps..                        | 56.37     | 58.02     | Dec.. | 1.65     | 2.8   |
| St. Louis & San Fran-<br>cisco.....        | 412,663   | 405,097   | Inc.. | 7,571    | 1.9   |
| Net earnings.....                          | 212,292   | 178,699   | Inc.. | 33,593   | 18.8  |

| Per cent. of exps..        | 1877.   | 1876.   | Inc. or Dec. | P. c.       |
|----------------------------|---------|---------|--------------|-------------|
| St. Paul & Sioux City..... | 48.82   | 55.90   | Dec.         | 7.38 13.9   |
| Net earnings.....          | 129,472 | 102,041 | Dec.         | 32,569 20.1 |
| Per cent. of exps..        | 30.176  | 45.303  | Dec.         | 22,127 45.8 |
| Per cent. of exps..        | 80.08   | 70.21   | Inc.         | 9.87 14.1   |
| Sioux City & St. Paul..... | 73,970  | 102,987 | Dec.         | 29,017 28.2 |
| Net earnings.....          | 10,628  | 20,258  | Dec.         | 9,630 47.4  |
| Per cent. of exps..        | 85.60   | 80.32   | Inc.         | 5.28 6.6    |

Month of May:

| Atchison, Topeka & Santa Fe.....               | \$183,323 | \$212,083 | Dec. | \$28,761 13.6 |
|--|-----------|-----------|------|---------------|
| Bur., Cedar Rapids & Northern.....             | 71,606    | 100,902   | Dec. | 29,296 29.0   |
| Canada Southern.....                           | 149,312   | 123,087   | Inc. | 26,225 21.3   |
| Central Pacific.....                           | 1,575,000 | 1,757,415 | Dec. | 182,415 10.4  |
| Chicago & Alton.....                           | 331,256   | 423,645   | Dec. | 102,389 24.2  |
| Chicago, Milwaukee & St. Paul.....             | 606,000   | 819,562   | Dec. | 213,562 26.1  |
| Denver & Rio Grande.....                       | 65,436    | 34,804    | Inc. | \$30,772 87.6 |
| Illinois Central (Illinois lines).....         | 358,905   | 471,955   | Dec. | 112,690 23.9  |
| International & Great Northern.....            | 81,822    | 70,606    | Inc. | 11,216 16.0   |
| Missouri, Kansas & Texas.....                  | 231,307   | 212,928   | Inc. | 18,379 8.6    |
| Missouri Pacific.....                          | 303,543   | 264,847   | Inc. | 38,695 14.6   |
| St. Louis, Alton & T. H., Belleville Line..... | 34,950    | 39,209    | Dec. | 4,240 11.0    |
| St. Louis, Iron Mt. & Southern.....            | 304,000   | 287,330   | Inc. | 46,661 18.1   |
| St. Louis, Kan. City & Northern.....           | 227,178   | 237,355   | Dec. | 10,177 4.3    |
| St. Louis & San Francisco.....                 | 102,096   | 99,601    | Inc. | 2,495 2.5     |
| Toledo, Peoria & Warsaw.....                   | 85,011    | 125,209   | Dec. | 40,198 32.1   |
| Wabash.....                                    | 335,857   | 365,168   | Dec. | 29,311 8.0    |

Week ending June 1:

|                               |          |          |      |             |
|-------------------------------|----------|----------|------|-------------|
| Great Western, of Canada..... | \$68,118 | \$70,362 | Dec. | \$2,244 3.2 |
|-------------------------------|----------|----------|------|-------------|

Week ending June 2:

|                  |           |           |      |               |
|------------------|-----------|-----------|------|---------------|
| Grand Trunk..... | \$149,046 | \$169,255 | Dec. | \$20,209 11.9 |
|------------------|-----------|-----------|------|---------------|

## Delaware Fruit Traffic.

The fruit traffic from Delaware and the Eastern Shore of Maryland promises to be very large this year, and the peach growers expect to make shipments of 4,000,000 baskets, or about 8,000 car-loads. The shippers are now trying to get a reduction in rates. At a recent meeting the Philadelphia, Wilmington & Baltimore offered to make a reduction of \$7 per car, provided the old system of chartering cars was given up. The proposal, after much discussion, was referred to an adjourned meeting.

## Petroleum Movement.

It is stated that the Standard Oil Company has bought a large tract of land on the west side of the Schuylkill in Philadelphia, and that a large refinery and storage tanks will be put up there. The tanks are to be connected by pipes with an oil yard to be established by the Philadelphia & Reading Company to accommodate this business. The shipments are to be made to Philadelphia over the Atlantic & Great Western, the Erie, the Lehigh Valley and the Reading, thus avoiding altogether the use of the lines controlled by the Pennsylvania, with which company the Standard combination is now at open war.

## Petroleum Exports.

For the five months from Jan. 1 to June the exports from the various ports for four years have been, in gallons:

|                   | 1877.       | 1876.      | 1875.      | 1874.      |
|-------------------|-------------|------------|------------|------------|
| New York.....     | 81,955,881  | 43,808,070 | 50,505,577 | 54,439,909 |
| Boston.....       | 1,571,029   | 923,872    | 1,030,102  | 1,201,226  |
| Philadelphia..... | 17,341,905  | 23,167,001 | 14,873,142 | 28,655,115 |
| Baltimore.....    | 10,889,162  | 15,530,572 | 10,339,829 | 1,866,888  |
| Richmond.....     | 1,874,400   |            |            |            |
| Portland.....     | 1,389,804   |            |            |            |
| Total.....        | 114,522,181 | 83,424,515 | 76,743,650 | 86,159,136 |

## Coal Movement.

Coal tonnages for the five months ending June 2 are reported as follows, the tonnage credited to each line being only that which originates upon it:

| Anthracite:   | 1877.     | 1876.     | Inc. or Dec. | P. c.          |
|---|-----------|-----------|--------------|----------------|
| Philadelphia & Reading.....                                 | 2,299,087 | 1,607,294 | Inc.         | 610,793 49.0   |
| Northern Central, from Shamokin Div. and Summit Branch..... | 231,497   | 297,993   | Dec.         | 66,496 22.3    |
| Central of N. J., Lehigh Division.....                      | 1,220,042 | 939,744   | Inc.         | 280,298 29.8   |
| Danville, Hazleton & Wilkesbarre.....                       | 6,561     | 14,063    | Dec.         | 7,502 53.2     |
| Pennsylvania Canal.....                                     | 109,219   | 93,496    | Inc.         | 9,723 10.6     |
| Lehigh Valley.....  | 1,609,911 | 1,226,593 | Inc.         | 377,378 30.8   |
| Pennsylvania New York.....                                  | 20,870    | 10,847    | Inc.         | 10,023 92.8    |
| Delaware, Lackawanna & Western.....                         | 890,106   | 520,476   | Inc.         | 369,630 71.0   |
| Del. & Hudson Canal Co.....                                 | 895,346   | 776,475   | Inc.         | 118,871 15.3   |
| Pennsylvania Coal Co.....                                   | 420,982   | 376,647   | Inc.         | 44,335 11.8    |
| State Line & Sullivan.....                                  | 4,888     | 25,105    | Dec.         | 20,247 80.7    |
| Total anthracite.....                                       | 7,696,479 | 5,888,673 | Inc.         | 1,807,806 30.7 |

Semi-bituminous:

|                             |         |         |      |             |
|-----------------------------|---------|---------|------|-------------|
| Cumberland, all lines.....  | 529,703 | 614,852 | Dec. | 85,149 13.8 |
| Huntingdon & Broad Top..... | 60,251  | 121,647 | Dec. | 61,396 50.5 |
| Tyrone & Clearfield.....    | 553,289 | 494,787 | Inc. | 58,502 11.8 |

Total semi-bituminous, 1,143,243 1,231,287 Dec. 88,043 7.3

Bituminous:

|                   |         |         |      |           |
|-------------------|---------|---------|------|-----------|
| Barclay B. R..... | 140,947 | 138,849 | Inc. | 2,098 1.5 |
|-------------------|---------|---------|------|-----------|

The anthracite production continues very large, in spite of the apparent inability to dispose of the coal mined, even at the extremely low prices now prevailing.

The May shipments out of the pools on the Monongahela River above Pittsburgh were 335,180 tons coal and 40,276 tons of



and another 212 feet long, in two spans, over Tippecanoe River, both for the Indianapolis, Peru & Chicago road.

The Cleveland (O.) Iron Co.'s Lake Shore Mill has started up, running double turn, after a short stop to repair boilers.

The American Bridge Co., of Chicago, recently completed 362 feet of iron bridge for the Duquesne Inclined Plane at Pittsburgh.

The Akron (O.) Iron Co. at a recent meeting resolved to increase the capital stock by \$75,000, to pay for the changes and improvements now in progress. The whole amount of the new stock has been taken by the present stockholders.

The Indianapolis Rolling Mill is at work on a contract to re-roll a lot of rails for the Fort Wayne, Muncie & Cincinnati road.

The Vulcan Iron Works, at St. Louis, has an order for 7,000 tons of steel rails for the Union Pacific. It is said that these rails are to be used for the branch to the Black Hills.

#### The Thielsen and Challenger Patent Truck.

Mr. H. Thielsen, formerly Chief Engineer of the Burlington & Missouri River Railroad, but afterwards for several years Superintendent of the Oregon & California, and still a resident of Portland, Oregon, writes to us as follows:

"As to your article on what you call 'Challenger's improved railroad truck,' let me state in correction that Challenger does not hold the control of it by any ante-dated patent of his. The truck was a joint product of ours, when I was either the Superintendent or Chief Engineer (I forget which) and he the Master Mechanic of the Burlington & Missouri River Railroad, he working it up from a rough design of mine. When I received the patent I gave him an undivided half-interest in it, according to previous agreement. Afterwards removing to Oregon, on account of the great distance between each other we exchanged papers giving each one the power to sell rights, but each one continuing to hold an equal and undivided interest in the patent."

#### Proposals for Railroad Building.

Mr. J. H. Grant, whose address is at No. 33 Wall street, New York, calls for proposals for building five miles of railroad. Further particulars can be had on application to him as above.

#### OLD AND NEW ROADS.

##### Foreclosure Sales.

No sales of railroad property have taken place during the past week.

Notice is given of the following sales to take place hereafter: *New Jersey Southern*, at Long Branch, N. J., June 19, under foreclosure of the first mortgage.

*Central of Iowa*, at Marshalltown, Ia., July 18, under foreclosure of the first mortgage.

*Mississippi Central*, at Jackson, Miss., Aug. 23, under foreclosure of the consolidated mortgage.

*Louisville, Cincinnati & Lexington*, in Louisville, Ky., Oct. 1, under foreclosure of the several mortgages.

*Dismal Swamp Canal*, at Norfolk, Va., Aug. 9, under the trust deeds of 1867 and 1869, by agreement of the trustees and the company.

##### Dividends.

Dividends have been declared as follows:

Morris & Essex (Delaware, Lackawanna & Western, lessee), 3½ per cent., semi-annual, payable July 2. Transfer books closed June 11.

New York Central & Hudson River, 2 per cent., quarterly, July 15.

Philadelphia, Wilmington & Baltimore, 4 per cent., semi-annual, payable July 2.

Parker & Karns City, 1 per cent., monthly, from the April earnings.

Fitchburg, 3 per cent., semi-annual, payable July 2.

Union Pacific, 2 per cent., quarterly, payable July 2.

Western Union Telegraph, 1½ per cent., quarterly, payable July 14.

##### Cincinnati, Sandusky & Cleveland.

A dispatch from Columbus, O., June 12, says: "The Supreme Court to-day decided against Rush B. Sloane, in the case of the Cincinnati, Sandusky & Cleveland Railroad Company against Thomas M. Sloane, on a motion for leave to file a petition in error, to reverse the order and the judgment of the Court of Common Pleas of Sandusky County. The Court said: 'The motion in this case is granted, and the Court being of the opinion that the orders of the Court of Common Pleas granting the injunction and appointing the Receiver in this case were vacated by the order of Judges Cadwell, Prentiss and McMath, made in this case, and that the subsequent order of the Court of Common Pleas directing the order of said Judges to be vacated and disregarded was unauthorized, it is ordered that the order of the Court of Common Pleas last named be and the same is hereby reversed and held for naught.' An opinion in the case will be prepared hereafter. The Farlow party will proceed, in the United States Court at Toledo to-morrow, to render still more secure, if possible, the ground gained here."

##### Western Union Telegraph.

The following statement is made for the quarter ending June 30, the June earnings being estimated:

|   |              |
|---|--------------|
| Surplus April 1.....                    | \$128,577 10 |
| Net earnings for the quarter.....       | 650,317 52   |
| Total.....                              | \$778,894 62 |
| Interest and sinking fund payments..... | 133,000 00   |
| Surplus.....                            | \$645,894 62 |

From this the board has resolved to declare a quarterly dividend of 1½ per cent., which will absorb \$507,213 of the surplus.

##### Walden's Ridge.

A preliminary survey has been made of this road from Emory Gap, Tenn., on the line of the Cincinnati Southern by Oak Dale Furnace and Winter's Gap to Coal Creek on the Knoxville & Ohio, about 36 miles. The final location has been made from Emory Gap to Winter's Gap, 16 miles, and a survey is to be made for a branch from Oak Dale, 10 miles from Emory Gap, to Knoxville, about 30 miles.

##### Memphis & Charleston.

The conditions of the proposed lease to the East Tennessee, Virginia & Georgia are that that company shall raise the \$500,000 necessary to make the overdue payments to the State of Tennessee; that the lease shall run for 20 years, but still be terminable on six months' notice. The rental is to be the interest on the debt. It is probable that the lease will be completed, as the controlling interest in both companies is held by the same parties.

##### Decatur, Mattoon & Southern.

A correspondent writes: "The sale of the Decatur, Sullivan & Mattoon (at one time known as the Chicago & Illinois Southern) under the foreclosure of the first mortgage was confirmed by Judge Treat, of the United States Circuit Court, at Springfield, Ill., on May 10, to George L. Ingersoll, Trustee for a syndicate composed of Charles L. Frost and Thomas B. Mason, of New York; J. C. Ayer, of Lowell, Mass., and G. L. Ingersoll, representing the Cleveland Iron Works, at Cleveland, O., who have formed a new corporation under the name of the Decatur, Mattoon & Southern Railway Company, with a view of extending the road to Evansville and Mount Vernon on the Ohio River. The contract is already taken by Robert Finnan & Co., of Pittsburgh, and more than half the road

finished. Fifty miles of iron are already laid between Olney on the Ohio & Mississippi road and Mattoon, and the whole line is to be completed during the summer."

The 50 miles of track referred to is on what was formerly known as the Grayville & Mattoon road, of which Robert Finnan & Co. became possessed through a foreclosure sale, and on which they last year laid track from Olney north to Newton, 20 miles. This track they have now extended from Newton north by west 30 miles, crossing the Vandalia Line near Greenup. We infer, though our correspondent does not directly state it, that this Grayville & Mattoon road is to be included in the Decatur, Mattoon & Southern.

##### The Attempt at Train Wrecking.

Four of the men who threw an engine from the track on the St. Louis & San Francisco road June 2, but failed to wreck the rest of the train, were arrested on June 6, but four others are said to remain at large. One of the men arrested has confessed, and says that the object was to rob the passengers and the express car.

##### Delaware, Lackawanna & Western.

Notice has been given of a reduction of 10 per cent. in the wages of the locomotive engineers and firemen of this road. A committee of the men was sent to consult with President Sloan, but without result so far as known, though it is said he promised that the 10 per cent. shall be restored in the fall. There has been some excitement and talk of a strike, but it seems probable that the reduction will be accepted.

##### Erje.

Superintendent Thomas, of the Delaware Division, recently discovered the existence of an organized system of stealing old iron, rails, frogs, drawheads, etc., which were taken from the line of the road and shipped by canal to Rondout. It is uncertain how much has been taken, but about 20 tons have been recovered.

##### Syracuse, Geneva & Corning.

The iron is now laid on this road from Corning, N. Y., northward 14 miles to a point two miles north from Beaver Dams.

##### Boston, Clinton, Fitchburg & New Bedford.

It is said that some of the stockholders will take legal measures to prevent the issue of the new preferred stock, on the ground that the purchase of some 13,000 shares of stock under the terms of the consolidation with the New Bedford Company last year was illegal, and practically makes the holders of the surrendered stock preferred creditors at the expense of the rest.

##### St. Louis, Iron Mountain & Southern.

In the matter of the application of the Union Trust Company for the appointment of a receiver, the United States Circuit Court has decided to refuse the order asked for, on the grounds that the evidence is not sufficient to justify the Court in appointing a receiver or in interfering with the present management.

##### Western, of Minnesota.

This company, lately organized in the Northern Pacific interest to complete the line known as the Brainerd Branch of the St. Paul & Pacific, has let the contract for the work to the well known contracting firm of De Graff & Co., of St. Paul, the line from Watab to Brainerd, 54 miles, to be in running order by Sept. 15. Much of the grading and bridging was done several years ago by the same firm under a contract with the St. Paul & Pacific. By the act passed by the Minnesota Legislature last winter it was provided that, in case the St. Paul & Pacific should refuse to accept the terms thereby offered, the unfinished work and the land grant should become the property of any company which would finish the line under the provisions of the act. The Western Company was organized to do so and has thus far complied with the requirements of the law.

##### Cairo & St. Louis.

The suit of this company to compel the issue of the bonds voted to it by Jackson and Union counties in Illinois was on trial at Cairo, Ill., recently, the case occupying the greater part of a week. The Court was unable to complete the hearing, owing to press of other business, but it will be disposed of at the present term.

##### The Arkansas Railroad Bonds.

Little Rock dispatches state that the Arkansas Supreme Court has sustained the recent decision of the Circuit Court, and holds that the law under which some \$6,000,000 of railroad aid bonds were issued or endorsed in 1869 is unconstitutional and the bonds consequently void. No interest has been paid on the bonds for several years.

##### Central, of New Jersey.

The Long Branch Division is this year doing a considerable business in carrying fruit and vegetables to the New York market. During the past week from seven to ten car-loads of strawberries alone have been brought in every night. Monmouth County, N. J., in which the greater part of the Long Branch line is, has for many years been noted for its truck farms, but heretofore the produce has been hauled to the landings on Baritan Bay and the Shrewsbury and Neversink rivers and shipped to New York by steamboats.

It is reported from Philadelphia that the Receiver has agreed to a compromise agreement with the Lehigh Coal & Navigation Company, by which the claim of that company for rental due will be settled by the payment of about \$350,000 in cash, the Central's claim for improvements made being accepted as an offset for the balance of rental due.

It is said that the promised installment of the back pay was not paid with the current wages for May, as expected, and a committee of the employees was appointed to confer with the Receiver in consequence.

The wages of the employees on the Lehigh & Susquehanna Division are to be reduced 10 per cent. It is not stated whether the enginemen and firemen are included in the reduction.

##### Kansas Central.

A contract is to be let shortly for an extension of this road for 25 miles westward from its present terminus at Holton, Kansas.

##### Little Falls & Salisbury.

A survey is being made for a narrow-gauge road from the Erie Canal at Little Falls, N. Y., to the Salisbury ore bank, in the northeast part of the town of Salisbury, Herkimer County. The distance is about 18 miles. The iron ore deposit is said to be very large and of very fine quality.

##### Central Vermont.

A dispatch from St. Albans, Vt., dated June 11, says: "Chancellor Homer E. Royce, sitting in the regular term of the Court of Chancery for Franklin County this afternoon, filed a decretal order on the petition of the Central Vermont Railroad Company as receiver and manager for an order of the sale of the Vermont Central and Vermont & Canada railroads and property to pay the trust or the receivership's debts. The petition was filed last September, and a final hearing was had at the present term, commencing May 17, and lasting three days, when a large array of parties and counsel were present. This decretal order is a very important one. The court considers: first, that the trust debt accrued and accruing in the administration of the Vermont Central and Vermont & Canada railroads, under the receivership thereof, as set forth in said petition, is a legal and binding debt, and constitutes a charge and first lien upon the Vermont Central and Vermont &

Canada railroads, their privileges and appurtenances and the equipment appertaining thereto; second, that the Court of Chancery has power to satisfy said lien by a sale of said railroads' equipment and other property, and that a sale may be ordered under this petition; third, that the amount and character of the trust debt is shown by the proofs, and the inability of the petitioners to provide for the same furnishes an occasion for, and the full justification of, a sale, and that the priorities as between different interests sufficiently appear from the proofs and prior proceedings in the case; fourth, I am therefore of the opinion that, on the allegations and proofs, the petitioners are entitled to the relief asked for, and that the prayer of the petition ought to be granted. But it is highly important to all interested that the question of the validity and priority of the trust debts referred to in the petition should be determined and settled before any sale of the property is had, and as doubts have been entertained, and in the event of ordering a sale, the question would probably be made as to when an appeal could be taken (whether immediately upon the order or after the sale, or sale and confirmation, it is for the above reasons and for the purpose of having all the questions involved under said petition, answers and proofs, so far as practicable, determined and settled before any further proceedings are had, ordered *pro forma*, on the day and year last aforesaid, at St. Albans aforesaid, that the petition be dismissed without prejudice."

On motion of the Central Vermont Company, petitioners, an appeal to the Supreme Court was granted. This appeal will not come up in regular course until the January term, 1878, but the Court has power to hold a special term sooner, if it sees fit, and it is thought that one will be held next month.

Later advices state that the Chief Justice has called a special term of the Supreme Court to be held at St. Albans, July 24, for the purpose of hearing the appeal from the *pro forma* order of the Chancellor.

##### Chicago, Saginaw & Canada.

The New York Supreme Court has granted an order to declare void \$3,574,000 bonds of this road, which were sold at sheriff's sale to satisfy a claim of Benjamin Richardson, and bought by him at a nominal price. The order was granted at suit of Daniel E. Sickles and others, who claimed that the sale was made through collusion with the officers of the company.

##### East River Bridge.

At a recent meeting of the board of trustees the President reported that the total expenditures up to May 31 had been \$7,468,648.66. It will require about three years more to complete the work.

##### Manchester & Keene.

There is a considerable local agitation just now in favor of this road, and some Manchester parties propose, if the company can complete the 23 miles of road from Keene, N. H., east to Greenfield, to build themselves the 16 miles required to complete the Manchester connection, from Greenfield east to Goffstown, on the Manchester & North Weare road.

##### Philadelphia & Reading.

The Philadelphia *Ledger*, of June 11, says: "The officers of the Reading Railroad Company say that from the 15th of June to the 15th of July the two companies, road and canal, will make \$500,000 if operations are continued. If they stop, the result will be for the month about \$85,000 profits from railroad traffic and steam colliers, which will be overcome by one month's loss from the canals, including rent and one month's loss from coal and iron, the company covering in all some \$180,000, showing a balance of a loss of \$95,000. While the managers of the Reading do not desire to be considered as opposed to a compromise and agreement with other companies, they do believe when such a compromise and agreement is made it must contain Mr. Gowen's original provisions: First, that the stoppage for the purposes of curtailment must be in the winter months, if at all; second, that competitive tonnage must be sold through one agency; third, that an effort must be made to sell the surplus in new markets rather than restrict the production; and fourth, that the Philadelphia & Reading Railroad must have a proper share of tonnage and control of the management. The managers believe there is nothing to prevent such plan being put into force at once. But nothing can be positively and definitely known until Mr. Gowen comes again into full and free converse with his board of managers and the parties to the proposed compact."

##### Mobile & Ohio.

The United States Circuit Court at Mobile has made an order that the three foreclosure suits brought by the trustees under the first mortgage, by Mr. Morris Ketchum and by the Swiss bondholders, shall be consolidated and proceed as one suit. It has also been decided that in the suit on the Tennessee substitution mortgage the European bondholders represented by Moran Brothers, of New York, are entitled to be admitted to the suit as defendants.

In the matter of the claim of Alexander Duncan to a lien on the coupons of 1874, argument was heard June 9.

Later dispatches say that the Court has decided in favor of the claims as set forth in the Duncan trustee suit; that is, has allowed the claim of the Tennessee substitution bonds and the coupons paid by Alexander Duncan in 1874 to an equal lien on the property with the first mortgage bonds. The Ketchum and Swiss bondholders' suits claimed a prior lien for the first mortgage.

##### Chicago, Clinton & Western.

An order for the sale of this road was made by the District Court at Davenport, Ia., June 9. The road is intended to run from Clinton, Ia., to Iowa City about 50 miles; track has been laid on 15 miles from Clinton and on nine miles from Iowa City to Elmira. Only the last named section is operated. The claims against the road amount to \$300,000, chiefly for iron and materials furnished and for work done by contractors.

##### Manchester & Ashburnham.

A meeting was to be held in Manchester, N. H., June 14, to consult as to building this road, and also to discuss the expediency of changing the line so as to make the western terminus at Fitchburg instead of at Ashburnham.

##### Washington & Ohio.

In the United States Circuit Court at Richmond, Va., June 7, a bill was filed asking for an injunction against this company and the appointment of a receiver for the road. The application is made by the bondholders, who ask also for a foreclosure and sale of the road.

##### Lafayette, Muncie & Bloomington.

The United States Circuit Court has made an order authorizing Receiver Chapman to borrow \$50,000 and issue Receiver's certificates for that amount. The money is to be used to pay certain pressing claims against the road, chiefly back wages, supply bills, rental of equipment and judgments unsettled.

##### Philadelphia & Reading.

A London telegram says that at a meeting of stock and bondholders held in that city June 6 it was voted to accept the company's proposition as made in the circular of May 1. An amendment was offered, requiring the company to postpone payment of the floating debt until the bondholders' claims were satisfied, but it was subsequently withdrawn.

The proposition required the funding in five-year 6 per cent. scrip, convertible into 7 per cent. income bonds, of the coupons for three years on the general mortgage and Perfection sterling bonds; the coupons for five years on the de-



venture and convertible bonds, the Tidewater and Susquehanna Canal bonds and the Schuylkill Navigation bonds and stock; the suspension for four years of the sinking fund payments and drawings, the income so released to be applied to the payment of the floating debt.

#### Paulinskill Valley.

This road is now completed and ready for traffic. It extends from Blairstown in Warren County, N. J., southwest down the valley of the Paulinskill to the Delaware, Lackawanna & Western at Delaware Station. It is 10½ miles long and has been built and is owned chiefly by Mr. John I. Blair, the well known railroad man and iron manufacturer, who resides at Blairstown.

The first shipment of freight over the road is said to have been a barrel of gin, which temperance men would consider a very bad beginning.

#### Naugatuck.

This company has, it is said, resolved to build a branch from Wheeler's Farm, near Derby, Conn., southeast to the New York, New Haven & Hartford between Milford and West Haven, a distance of about four miles. This branch is intended as a cut-off or short line for business from its road bound eastward. There is a good deal of traffic from Derby, Ansonia and other manufacturing towns on the line to New Haven, and the proposed cut-off will shorten both distance and time for this considerably. It will enable the company especially to meet the competition of the New Haven & Derby road on this class of traffic.

#### Emmentown & Shipperville.

The contracts for the extension from Edenburg, Pa., to Clarion were let as follows: Grading, S. J. Johnson & Co.; trestle work, Hahn & Wagner; ties, Jacob Black. The work is being pushed forward as rapidly as possible and the grading is nearly completed to Shipperville. The iron is all purchased and tracklaying was to be begun this week. The funds for the extension are provided by an issue of \$150,000 first-mortgage 7 per cent bonds, a considerable amount having already been taken along the line. The road serves a large oil region, and the completed section is said to be doing a large business.

#### Pennsylvania Company.

At the annual meeting in Pittsburgh, June 5, the following brief statement was presented:

|  |                 |
|--|-----------------|
| Aggregate earnings from lines operated and other sources in 1876.....                  | \$14,584,710 35 |
| Expenses of operating the lines.....   | 8,027,029 39    |
| Net earnings.....  | \$6,557,680 96  |
| Interest on bonds, dividends, rentals and all charges connected with leased lines..... | 5,199,941 59    |
| Surplus.....   | \$1,357,739 37  |
| Interest on bonds and debt of Pennsylvania Co. and general expenses.....               | \$774,538 22    |
| Amount contributed to sinking funds of leased roads.....                               | 178,558 00      |
|  | 953,116 22      |
| Net profit for the year.....   | \$404,623 15    |

Which is passed to the credit of profit and loss, after meeting all charges of every kind for the year.

#### Springfield, Athol & Northeastern.

This road is to be sold at sheriff's sale July 5 to satisfy a claim of Willis Phelps for \$118,000, chiefly, we believe, for money advanced. The sale will be made subject to the bonded debt of \$600,000, and will effect only a transfer of the stockholders' interest in the property. As no outside bidders are likely to compete, Mr. Phelps will probably have to buy it in. The road extends from Springfield, Mass., northeast to Athol, 40½ miles and was originally known as the Athol & Enfield. It has not been a very good property, having never earned enough to pay interest on the bonds. The city of Springfield holds \$300,000 of the stock.

#### Cincinnati, Sandusky & Cleveland.

The two rival receivers of this road are so busily engaged in devising legal traps and pitfalls for each other, and in trying to get or keep possession of the road, that they have no time to attend to matters of minor importance. The coupons due June 1 were not paid and are not likely to be paid, at present at any rate. The bonds on which coupons were due in June are the Cincinnati, Sandusky & Cleveland consolidated bonds, of which \$1,072,300 were outstanding by the last report.

#### Stroudsburg & Wind Gap.

It is proposed to build a road from Stroudsburg, Pa., south by west through the Wind Gap to Chapman, whence a branch of the Lehigh & Susquehanna road runs to Bethlehem. The distance from Stroudsburg to Chapman is about 19 miles, for six of which there is an old grade in good condition.

#### Colchester.

This road is now completed and will shortly be opened for traffic. It is about five miles long, from the village of Colchester, Conn., to a connection with the Boston & New York Air Line. The road has been built chiefly with money voted by the town of Colchester, and the Air Line Company will equip and work it as a branch.

#### Martha's Vineyard.

A meeting of the stockholders was held in Edgartown, Mass., June 5, at which arrangements were made for paying off the floating debt. Provision was also made for putting the road in good order ready for the summer travel.

#### Evansville, Terre Haute & Chicago.

It is said that this company paid only \$15 on each of the coupons due May 1, and asked the bondholders to fund the other \$20. Interest has always been paid promptly heretofore. There are \$750,000 first-mortgage bonds outstanding, which were issued in 1870, while the road was being built. The road is 54½ miles long, from Terre Haute, Ind., northward to Danville, Ill., and is part of a pretty direct line from Chicago to Evansville.

#### Denver & Rio Grande.

It will be remembered that this company did not pay the coupons due May 1. Hassler's Report says that application has already been made for the appointment of a receiver and that the case will come up at the July term of the Circuit Court in Denver, when it will certainly be pressed.

The track on the extension of the La Veta Branch, from La Veta, Col., to Grayback Gulch is now laid to the summit on the range de Christo range, 15 miles from La Veta. This summit is 9,399 feet above tide-water and is said to be the highest elevation yet attained by a railroad track in the United States.

The Summit Tunnel on the Lima & Oroya Railroad in Peru is 15,200 feet above the sea level. The track, however, has not yet reached that point.

#### Wheeling & Lake Erie.

Mr. H. B. Willson, the contractor who has undertaken the completion of this road, has track laid and a train running from Norwalk, O., on the Lake Shore road, north to Milan, five miles. Work is being pushed on the section of seven miles from Milan north by east to Huron on Lake Erie, and also on the 14 miles from Norwalk southeast to New London.

#### East Berlin Branch.

The track on this road is now all laid and trains will be put on shortly. It extends from the Hanover Junction, Hanover & Gettysburg road at Red Hill, Pa., to East Berlin, seven miles,

through a farming country. The road has cost about \$67,000; the company has a capital stock of \$40,000 and a bonded debt of \$25,000. It is chiefly owned by parties interested in the Hanover road, of which it is a branch.

#### Portland & Ogdensburg.

The track is now laid on the Vermont Division for five miles northwest from Johnson, Vt. On the western end it is laid from Swanton southeast to East Fairfield, 25 miles, leaving only a gap of five miles to be ironed. The work goes on slowly, but it is thought that trains will soon through to Swanton by the end of July.

#### Necedah & New Lisbon.

It is said that work will be begun soon on a line 12 miles long from Necedah, Wis., southward to New Lisbon, on the Chicago, Milwaukee & St. Paul.

#### Toledo, Peoria & Warsaw.

The Receiver's report for April and May is as follows:

|                              |              |
|------------------------------|--------------|
| Balance, April 1.....        | \$25,573 17  |
| Receipts for April.....      | 132,878 39   |
| Receipts for May.....        | 129,237 81   |
| Total.....                   | \$287,689 28 |
| Disbursements for April..... | \$146,892 19 |
| Disbursements for May.....   | 124,856 10   |
|                              | 270,748 29   |

Balance, June 1..... \$15,940 99  
In April the disbursements exceeded the receipts by \$14,013.69; in May the receipts were the greatest by \$4,381.71. The excess of disbursements was \$9,632.18 for the two months.

#### Los Angeles & Independence.

This company was organized several years ago to build a line from Los Angeles, Cal., to the new mining regions of Inyo County and also from Los Angeles to tide water. The only part built was from Los Angeles to the port of Santa Monica, about 15 miles. This was intended to compete with the Southern Pacific line to Wilmington, and the new port was to be made the chief shipping point for Los Angeles. The new line has not been very successful, however, and its owners have just sold it to the Southern Pacific Company, to which it may be of some value, not for its traffic, but because its possession will put a stop to competition.

#### Houston & Texas Central.

The following notice to creditors has been issued:

"The company announces that the creditors who have accepted the plan of liquidation proposed to its unsecured creditors on the 10th day of May, 1877, represent a large portion of the company's indebtedness, but many creditors residing at distant points have not determined their action, and the residence of the holders of a large amount of claims is still unknown."

"Many of the claims not yet accepted for are held by indorsement, and correspondence is necessary to enable holders to ascertain the views of indorsers."

"It is necessary that the company should know the views of these creditors before it can determine whether the plan of liquidation shall be put in operation."

"Under these circumstances and in justice to non-resident creditors of the class named, the company deems it proper to extend the time for unsecured creditors to signify their acceptance of the plan of liquidation until the 20th day of June, 1877."

"No action will be taken under the plan of liquidation until after the date named. The company has reason to hope that it will then be able to announce its readiness to liquidate all claims against it on the basis proposed. The settlements then made will date from June 1, 1877, as previously stated."

"Creditors who have accepted the plan of liquidation may rest assured that pending the announcement of the adoption of the plan proposed, no preference will be given to any creditor."

"Holders of all classes of claims (except amounts due employees on pay-rolls) are requested to forward statement of the same to the treasurer."

#### St. Louis & Missouri River.

A company by this name has been organized to build a suburban road about six miles long in St. Louis, starting from the Union Depot in that city and running westward to the intersection of Olive street with the old Bonhomme road. The capital stock is to be \$75,000; the incorporators are Joseph Shippen, Hermann E. Haussler, Charles Miller, James O. Broadhead, Edwin Harrison and Joseph Brown.

#### Whitehaven, New Glasgow & North Shore.

Surveys are now being made for this road, which is to connect the Intercolonial with the port of Whitehaven near the eastern extremity of Nova Scotia. The line now being surveyed leaves the Eastern Extension, now under construction, near Antigonish and runs by Beech Hill and St. Andrews to Guysboro town. The route beyond that point is not determined.

#### Cincinnati, Montgomery & West Loveland.

A company by this name has been organized to build a narrow-gauge railroad from Cincinnati by way of Bond Hill, Pleasant Ridge and Montgomery to West Loveland, about 20 miles. The road is intended chiefly for suburban traffic.

#### Cincinnati & Eastern.

This road is now completed and opened for traffic to Sardinia, O., seven miles east of the late terminus at Mount Oreb and 38 miles from the junction with the Little Miami road at Plainville. The road is graded to Winchester, 10 miles further, and work on the track is progressing steadily.

#### Ohio & Mississippi.

At a meeting held last week the following committee was selected to represent the stockholders: W. D. F. Manice, F. F. Dimpfel, R. L. Cutting, Jr., Wm. H. Cox, Henry M. Day, Jas. M. Hartshorne, A. Campbell. The committee chose Mr. Manice Chairman and Mr. Day Secretary and Treasurer. The committee is charged to obtain full information as to the condition and prospects of the company and to report thereon to the stockholders.

#### Pittsburgh & Castle Shannon.

Subscriptions enough have been secured to warrant the commencement of work on the proposed extension from Castle Shannon, Pa., to Washington, and the final location of the line is to be made at once. A new company will be organized to build the extension.

#### Grand Southern.

Work on this road is progressing well, and it is expected that the grading and masonry of the section from St. George, N. B., eastward 25 miles will be completed in July. The fencing along the line is being put up and the ties distributed.

#### Portage Lake & Lake Superior Ship Canal.

The property of this company, consisting of a ship canal and other works forming a line of navigation across Keweenaw Point and through Portage Lake, from Keweenaw Bay to the main waters of Lake Superior, was sold recently at foreclosure sale and bought in by some of the bondholders.

#### Monadnock.

The Peterboro (N. H.) Times says: "We understand that a proposition has been made by responsible parties to furnish money at 5 per cent. interest sufficient to pay all the outstand-

ing bonds and all other debts whatsoever of the Monadnock Railroad Company. This proposition, we are told, has been accepted, and accordingly a notice of the company appears in another column, calling upon all the holders of their bonds to present them for redemption July 1, as no interest will be allowed on them after that date. It is also reported that the same parties have lately purchased 1,025 shares of the Monadnock Railroad stock. This leaves only 1,029 shares of the total stock in all other hands."

The road is leased by the Boston, Barre & Gardner Company.

#### Wisconsin Central.

Track has been laid on the gap of 12 miles left last fall on the Main Line between Butternut Creek, Wis., and Chippewa River, completing the road. The work was finished on June 4 at the Chippewa. The company now owns a line from Menasha, Wis., northwest to Mannville and thence north by west to Ashland on Lake Superior, 250 miles; and a line from Stevens Point south to Portage, 71 miles; it leases the Milwaukee & Northern, from Milwaukee to Menasha, 101 miles, and from Hilbert to Green Bay, 27 miles, the whole system forming a line from Milwaukee to Ashland, 351 miles, with branches from Hilbert to Green Bay, and from Stevens Point to Portage, making 449 miles in all, of which 321 miles are owned and 128 leased. The road has been built by a company known as the Phillips & Colby Construction Company and is largely owned by New England men. It has a large land grant, including much timber land and on the north end some iron deposits.

#### Auction Sales of Railroad Securities.

In New York, June 6, at auction, Houston & Great Northern convertible bonds brought 21; International convertible bonds, 23; Mobile & Ohio convertible bonds, 6; Illinois & St. Louis Bridge second-mortgage bonds, 24; Toledo, Canada Southern & Detroit first-mortgage bonds, 29; New Orleans, Jackson & Great Northern consolidated bonds, 25; \$3,000 Selma, Rome & Dalton first-mortgage bonds sold for \$50; 100 shares Mobile & Ohio stock for \$33; 128 shares International & Great Northern stock for \$220; \$36.50 scrip of the same company for \$2; 110 shares Illinois & St. Louis Bridge for \$11; 132 shares Toledo, Canada Southern & Detroit for \$10.50; \$100,000 Brunswick & Florida first-mortgage bonds for \$30.

#### Chicago & Pacific.

In the suit pending for the last two years as to the crossing of this road and the Chicago & Northwestern at Elgin, Ill., the United States Circuit Court has finally decided that the Chicago & Pacific must cross the Northwestern above grade. The bridge or crossing must be built without interfering with the Northwestern trains; it must be built under the supervision of a commissioner to be appointed by the Court, and the expense will be divided between the two companies in such proportion as the Court shall decide hereafter. The Chicago & Pacific may continue to use the existing grade crossing until the new one is finished, and must pay all the expense incurred for watchmen, etc., during the time it has used the grade crossing.

#### College Hill.

This company, which owns a short suburban line out of Cincinnati, has filed a certificate of the increase of its capital stock from \$100,000 to \$300,000.

#### Waynesville, Port William & Jeffersonville.

Work on the grading of this narrow-gauge road was begun at Allentown, O., June 7. The road is to be of 3 ft. gauge and is to extend from Waynesville, O., east by north to Jeffersonville, about 30 miles.

#### Hartford, Providence & Fishkill.

A general reduction of wages has been ordered, which will vary from 10 to 20 per cent., according to the amount now paid. It will include all the officers and employees of the road.

#### Massachusetts Midland.

The location of this projected narrow-gauge road has been completed, and it is said that work will soon be begun. It is to run from Boston to North Reading, 18 miles. Some heavy work, chiefly rock-cutting, will be required. The line is nearly parallel and close to the Boston & Maine.

#### Kansas Pacific.

The case of the Kansas Central Company against the Kansas Pacific Company came up at Leavenworth, Kan., last week, but was not tried. An application to remove the suit to the United States Court was granted. Meantime the injunction against the holding of any meeting by the Kansas Pacific to elect directors remains in force.

#### Cleveland, Tuscarawas Valley & Wheeling.

At a recent meeting of the board it was decided to accept the subscriptions already secured on account of the proposed extension from Uhrichsville, O., to Wheeling, and to begin work at once. The distance is about 48 miles. The subscriptions made along the line amount to about \$200,000.

#### Central, of Iowa.

A dispatch from Davenport, Ia., says: "Mr. T. M. Fisher, Special Master in Chancery for the sale of the Central Railroad of Iowa, has received directions to sell that property at once. The decree of sale was made in October, 1875, but was not executed on account of litigation between the mortgagees. It will now be sold at Marshfield, on July 18, under the first mortgage of \$3,700,000, though the total of liabilities of the road reaches \$6,000,000. The line is 189 miles long and will be bought in by the bondholders."

The directions to sell were probably from the trustees under the first mortgage, as the Court recently declined to order the sale, but said that the trustees might do so.

#### Florida Central.

This company was recently reorganized under an order of the United States Circuit Court. A Jacksonville dispatch says that on June 8, by order of the Court, the road was formally transferred to the possession of the company by the Receiver. The road is 59 miles long, from Jacksonville, Fla., to Lake City, and was for a time a part of the Jacksonville, Pensacola & Mobile.

#### Denver Pacific.

The suit of Arapahoe County, Col., against this company and the Kansas Pacific is to be removed by mutual agreement to the United States Circuit Court. All parties have agreed to take no action in the case until that court meets in July.

#### Wallkill Valley.

The bondholders, who bought this road at the recent foreclosure sale, have organized a new company to be known as the Wallkill Valley Railroad Company. It is stated that the new company will put the road in good condition and make many improvements, and that the gauge will be changed to 4 ft. 8½ in. This last change can hardly be made, however, until the road has some other connection than the Erie.

#### Floods in Kansas.

The railroads of Kansas and Western Missouri have been suffering from another period of excessive rain and consequent floods. Last week the Atchison, Topeka & Santa Fe was again blocked by wash-outs between Topeka and Atchison and Topeka and Kansas City. The Missouri Pacific was broken between Leavenworth and Atchison and the Kansas Central was so badly washed west of Leavenworth that no trains ran for a week. The Missouri River was unusually high, so that the



Kansas City, St. Joseph and Council Bluffs track was under water at Winthrop, opposite Atchison. Some bad wash-outs were reported on the St. Louis, Kansas City & Northern near Kansas City and on the western end of the Hannibal & St. Joseph.

#### West Wisconsin.

Receiver Ferry issues the following circular to railroad companies, dated June 2, and addressed to connecting lines: "Having been appointed Receiver of the West Wisconsin Railway by the Circuit Court of the United States for the Western District of Wisconsin, and having taken possession of said railroad and its property under said appointment, I have to request that you will continue to make your monthly report as heretofore to C. D. W. Young, Auditor, making a separate report for the business transacted with the West Wisconsin Railway Company prior to the first day of June, and after that date reports to be made of the business transacted with the road operated by the Receiver.

"We will remit to you by check accompanied by original and duplicate receipts for your signature and return."

#### Illinois Central.

The Land Department reports for May sales of 397.45 acres for \$2,492.70. The cash collected on land contracts was \$11,469.53.

The Traffic Department reports earnings on the 707 miles of road in Illinois as follows: 1877, \$358,905.41; 1876, \$471,595.31; decrease, \$112,689.90, or 23.9 per cent. The earnings this year were \$507.64 per mile.

### ANNUAL REPORTS.

#### Baltimore & Potomac.

This company owns a line from Baltimore to Washington, 43 miles, with a branch from Bowie, Md., southward to the Potomac at Pope's Creek, 49 miles, being 92 miles in all. Its entrance into Baltimore and connection with the Northern Central is through a very costly tunnel and other expensive works. It is controlled by the Pennsylvania and worked in connection with the Northern Central.

The property is represented by:

Stock (\$38,622 per mile)..... \$3,553,250  
Bonds (\$61,228 per mile)..... 5,633,000

Total (\$99,850 per mile)..... \$9,186,250

The bonds are guaranteed by the Northern Central and Pennsylvania companies.

The earnings for the year ending Dec. 31, 1876, were:

|                           | 1876.        | 1875.        | Inc. or Dec.     | P. c. |
|---------------------------|--------------|--------------|------------------|-------|
| Gross earnings.....       | \$722,485 56 | \$678,091 69 | Inc. \$44,393 87 | 6.5   |
| Expenses.....             | 600,205 09   | 550,012 72   | Inc. 50,192 37   | 9.1   |
| Net earnings.....         | \$122,280 47 | \$128,078 97 | Dec. 5,798 50    | 4.5   |
| Gross earn. per mile..... | 7,853 10     | 7,370 56     | Inc. 482 54      | 6.5   |
| Net ".....                | 1,329 14     | 1,392 16     | Dec. 63 02       | 4.5   |
| Per cent. of exp's.....   | 83.07        | 81.11        | Inc. 1.96        | 2.4   |

These receipts and expenses were divided between the two lines as follows:

|                        | Earnings.    | Expenses.    | Net.         | Earn. per P. c. of |
|------------------------|--------------|--------------|--------------|--------------------|
| Washington Line.....   | \$678,091 69 | \$541,596 51 | \$136,495 18 | 15.788             |
| Pope's Creek Line..... | 43,591 01    | 58,608 58    | 15,017 57    | 890                |
| Total.....             | \$722,485 56 | \$600,205 09 | \$122,280 47 | \$7,853 83.07      |

President Bowie's report says: "The general expenses and those for conduct of transportation were largely reduced. The increased total expenses arise solely from large outlays on maintenance of way caused by the use of a larger amount of track material, embracing 614 tons of steel rails, 39,416 cross-ties, 3,031 pairs spikes on main tracks, and additions and repairs to switches, aggregating \$37,900, besides repairs to road-bed, rebuilding retaining wall of tunnel near Gilmor street, ditching entire length of Washington line, filling up trestle openings, building brick culverts on Pope's-Creek line and repairs of bridges on both lines, costing \$22,900; a total of \$70,800. Nearly one-half of the main line between Baltimore and Washington has been overlaid with steel rails; the remainder, and the whole of the Pope's-Creek line, repaired with new iron. These large expenditures show a marked improvement in the condition of the tracks, and will reduce the cost of repairs. During the year there was charged to construction and equipment account, for double track, etc., \$15,820.52. A new and handsome iron bridge is being built by the city over the Pennsylvania-avenue opening of the tunnel. Extensive repairs have been made in the Herbert's Run, Little Patuxent and Beaverdam bridges of the Washington Line, and nearly all the bridges of the Pope's-Creek Line have been entirely renewed or extensively repaired.

"The motive power and passenger and freight equipment were fully equal to all demands upon them, and were believed to be in the best condition, except that, because of the requirements of the Centennial travel, some of the passenger coaches could not last year receive the attention necessary to keep them in the handsomest order. But this has been largely rectified, and those that have not yet been through the shops will be before the close of the year. An extensive coal yard on the property on Fourteenth street, Washington, had been constructed and fitted up; also, a siding 1,128 feet long, at the north end of the tunnel, and suitable pens for a stock-yard in connection with it; and also a new siding 1,105 feet long, between Eighth and Tenth streets southwest, to facilitate the passage of freight trains.

"Other improvements in our own property and adornments of the public grounds through which they run were contemplated, which, it is confidently believed, if they did not remove the objections of the property-holders in Washington who desire the removal of their depot on Maryland avenue to a point further out, will satisfy Congress of the unreasonableness of their demands. Having previously reduced our expenditures as far as compatible with the proper preservation of the road and its equipment, we have at last and reluctantly been compelled to reduce the pay of the officers and employees 10 per cent., which went into effect on the 1st instant, and which, we are gratified to say, has been appreciated and acquiesced in without complaint by all in our service."

#### Northern (New Hampshire).

This company owns a line from Concord, N. H., northwest to White River Junction, Vt., 69.5 miles, with a branch from Franklin, N. H., north to Bristol, 13.5 miles, making 83 miles in all. It is equipped with 12 passenger and 13 freight engines; 14 passenger, 2 mail and smoking, 1 mail and 7 baggage cars; 423 long and 101 short merchandise cars; 19 gravel cars. The third-second annual report covers the year ending March 31, 1877.

The general account is as follows:

|                                      |                |
|--------------------------------------|----------------|
| Stock (\$36,900 per mile).....       | \$3,068,400 00 |
| Bond due April 1, 1874.....          | 100 00         |
| Bills payable.....                   | 198,000 00     |
| Income.....                          | 37,012 86      |
| Contingent fund.....                 | 506,730 87     |
| Coupons and dividends unclaimed..... | 9,150 26       |
| June dividend.....                   | 74,932 50      |

Total (\$46,920 per mile)..... \$3,894,326 49

The company owns \$71,100 of its own stock and has \$254,245.72 invested in the Concord & Claremont road. Cash and bills receivable amount to \$321,426.96, and materials on hand to \$150,478.76.

The work done for the year was as follows:

|                               | 1876-77. | 1875-76. | Inc. or Dec. | P. c. |
|-------------------------------|----------|----------|--------------|-------|
| Train mileage, passenger..... | 190,218  | 191,287  | Dec. 1,069   | 0.6   |
| Train mileage, freight.....   | 245,608  | 262,747  | Dec. 17,139  | 7.3   |
| Train mileage, other.....     | 4,707    | 4,992    | Dec. 285     | 4.9   |

|                                       |            |            |                |     |
|---------------------------------------|------------|------------|----------------|-----|
| Total.....                            | 438,533    | 458,986    | Dec. 20,453    | 4.5 |
| Passengers carried.....               | 354,664    | 163,229    | Dec. 191,435   | 5.2 |
| Passenger mileage.....                | 5,766,165  | 6,067,335  | Dec. 301,170   | 4.8 |
| Tons freight carried.....             | 323,513    | 345,713    | Dec. 22,200    | 6.4 |
| Tonnage mileage.....                  | 20,081,812 | 21,491,953 | Dec. 1,460,141 | 6.8 |
| Av. pass. train load, No.....         | 30.31      | 31.67      | Dec. 1.36      | 4.3 |
| Av. freight train load, tons.....     | 82.23      | 81.80      | Inc. 0.43      | 0.5 |
| Train mileage per mile of road.....   | 5,284      | 5,590      | Dec. 306       | 4.5 |
| Pass. mileage per mile of road.....   | 69,472     | 72,980     | Dec. 3,508     | 4.8 |
| Tonnage mileage per mile of road..... | 241,347    | 258,930    | Dec. 17,582    | 6.8 |

Of the passenger mileage 59.9 per cent., and of the tonnage mileage 94.1 per cent., was of business to and from other roads. The earnings for the year were:

|                              | 1876-77.     | 1875-76.     | Inc. or Dec.     | P. c. |
|------------------------------|--------------|--------------|------------------|-------|
| Passengers.....              | \$162,709 35 | \$183,319 97 | Dec. \$20,610 62 | 11.2  |
| Merchandise.....             | 267,506 63   | 295,145 53   | Dec. 27,641 90   | 9.4   |
| Express, mail and rents..... | 28,087 18    | 25,516 36    | Inc. 2,570 82    | 10.1  |
| Total.....                   | \$458,303 16 | \$503,984 86 | Dec. \$45,681 70 | 9.1   |
| Expenses.....                | 302,888 85   | 340,535 62   | Dec. 37,646 77   | 11.1  |
| State tax.....               | 32,254 24    | 42,639 02    | Dec. 10,374 78   | 26.4  |
| New rail account.....        | 19,734 49    | 25,560 28    | Dec. 5,825 79    | 29.8  |
| Total.....                   | \$354,887 58 | \$408,734 92 | Dec. \$53,847 34 | 13.2  |

|                                 |              |             |                 |     |
|---------------------------------|--------------|-------------|-----------------|-----|
| Net earnings.....               | \$103,415 58 | \$95,249 94 | Inc. \$8,165 64 | 8.6 |
| Gross earn. per mile.....       | 5,521 72     | 6,072 11    | Dec. 550 39     | 9.1 |
| Net ".....                      | 1,245 97     | 1,147 59    | Inc. 98 38      | 8.6 |
| Per cent. working expenses..... | 66.09        | 67.57       | Dec. 1.48       | 2.2 |
| Per cent. all exp's.....        | 77.44        | 81.10       | Dec. 3.66       | 4.5 |

The income account was as follows:

|  |              |
|--|--------------|
| Balance from previous year.....            | \$23,335 91  |
| Net earnings.....                          | 103,415 58   |
| Balance of interest account.....           | 39,090 49    |
| Balance on settlement of old accounts..... | 27,055 88    |
| Total.....                                 | \$188,897 86 |

December and June dividends, 2½ per cent. each..... 149,885 00

Balance of income account..... \$37,012 86

During the year 500 tons of iron and 195 tons of steel rails and 58,967 new ties were used in renewals; 3,400 tons of rails were repaired and relaid. One engine and 13 freight cars were built in place of old ones broken up.

The general depression of business still continued to affect the earnings of the road. The relations with connecting roads, however, are more favorable than for many years, and the decrease in gross earnings was met by a more than corresponding reduction in expenses.

The completion of the Peterboro & Hillaboro road, to which the company has extended some aid, is considered of importance as likely to improve the position of the Concord & Claremont road, in which the Northern holds a large interest. The only casualty of the year was the killing of a teamster, who tried to cross the track in front of a passenger train.

#### Boston & New York Air Line.

This company owns a line from New Haven, Conn., northeast to Willimantic, 54 miles. It was originally known as the New Haven, Middletown & Willimantic, was sold under foreclosure two years ago and the present company organized by the bondholders. It forms a part of the shortest existing rail line from New York to Boston, but has thus far been able to secure but a small share of the through business, owing partly to previous financial embarrassments and partly to the want of favor shown by connecting lines. The following figures are from the report presented at the recent annual meeting for the year ending May 31, 1876.

The general account is as follows:

|  |                |
|--|----------------|
| Stock, preferred.....                        | \$2,150,000 00 |
| " common.....                                | 656,100 00     |
| " scrip.....                                 | 25,058 25      |
| Total stock (\$52,429 per mile).....         | \$2,831,158 25 |
| First-mortgage bonds (\$7,889 per mile)..... | 426,000 00     |
| Loans, bills payable, balances due.....      | 60,359 55      |
| Profit and loss.....                         | 21,911 51      |
| Total (\$61,841 per mile).....               | \$3,339,429 31 |

The stock was principally issued for the bonds of the old company. The earnings for the year were as follows:

|                                       |              |
|---------------------------------------|--------------|
| Passenger cars.....                   | \$82,197 16  |
| Freight.....                          | 86,309 75    |
| Express, mail, etc.....               | 9,844 10     |
| Total (\$3,302.80 per mile).....      | \$178,351 01 |
| Expenses (71.23 per cent.).....       | 127,037 82   |
| Net earnings (\$960.24 per mile)..... | \$51,313 19  |
| Interest and discount.....            | 37,055 36    |
| Net balance.....                      | \$14,257 83  |

The earnings for the year showed an increase of \$20,050 or 17.9 per cent. over the previous year. The average receipt per train mile was \$1.05. The road carried 14,175 through passengers and 17,266 tons of freight, the traffic showing a steady increase through the year.

The condition of the road has been much improved and 17 miles of track are now laid with steel rails. More steel rails are to be laid during the current year.

#### Manchester & Lawrence.

This company owns a line from Manchester, N. H., to the Massachusetts line, 22.25 miles, and it leases from the Boston & Maine the Methuen Branch from the State line to Lawrence, Mass., 3.75 miles, making 26 miles in all. It was formerly worked by the Concord Company, but the courts having decided the lease to be illegal, it is now worked as a separate road but in connection with the Concord and under a parole agreement with that company. The report is for the year ending March 31, 1877.

The equipment in use is leased from the Concord Railroad Company. The company holds a two-fifths interest in the Manchester & North Weare road. The property is represented by \$1,000,000 stock, being \$44,944 per mile; there is no funded debt and no floating debt beyond the usual current balances.

The earnings for the year were as follows:

|   |              |
|---|--------------|
| Passengers.....                         | \$60,536 89  |
| Freight.....                            | 37,322 97    |
| Mails, express, etc.....                | 11,580 60    |
| Concord R. R. Co. on joint account..... | 67,760 13    |
| Total (\$6,834.68 per mile).....        | 177,200 59   |
| Expenses (43.48 per cent.).....         | 77,265 65    |
| Net earnings (\$3,862.92 per mile)..... | \$100,435 94 |
| Dividends, 10 per cent.....             | 100,000 00   |
| Surplus.....                            | \$435 94     |

No final agreement has been reached as to any division of the property interests held in common with the Concord Railroad Company, chiefly on account of the complicated nature of

some of those interests and the difficulty of finding a definite basis of division.

The directors say: "The general depression of business throughout the country has continued, and is even more marked and more generally felt on the line of our road than was the case at the time when we issued our last report, and its effect upon the receipts of our road is greater than last year. There has been no accident on the road by which persons or property were injured during the year."

#### Kansas Pacific.

This company owns a line from Kansas City, Mo., to Denver, Col., 639 miles, with a branch from Lawrence, Kan., to Leavenworth, 34 miles, making 673 miles in all. It controls and works the Junction City & Fort Kearney road, from Junction City, Kan., to Clay Centre, 33 miles; the Arkansas Valley road, from Kit Carson, Col., to La Junta, 76 miles; the Denver Pacific road, from Denver, Col., to Cheyenne, 106 miles, and the Denver & Boulder Valley road, from Hughes, Col., to Boulder, 27 miles, but the earnings of these lines are reported separately. The following figures for the year ending Dec. 31 are published by the Commercial and Financial Chronicle.

The work done on the Kansas Pacific road was as follows:

|  |            |
|--|------------|
| Passengers carried.....                          | 124,740    |
| Passenger mileage (27,091 per mile of road)..... | 18,229,525 |
| Tons freight carried.....                        | 290,992    |
| Tonnage mileage (106,390 per mile of road).....  | 71,540,084 |

Most of the traffic is carried long distances, the average passenger travel being 146.16 miles, and the average freight haul 246.70 miles. The earnings for the year were:

|                            | 1876.       | 1875.       | Inc. or Dec.   | P. c. |
|----------------------------|-------------|-------------|----------------|-------|
| Passengers.....            | \$766,450   | \$885,679   | Dec. \$119,229 | 13.5  |
| Freight.....               | 1,968,218   | 2,090,843   | Dec. 122,625   | 6.1   |
| Express, mails, etc.....   | 266,133     | 267,338     | Dec. 1,205     | 0.4   |
| Total.....                 | \$3,000,801 | \$3,363,760 | Dec. \$362,959 | 10.8  |
| Working expenses.....      | 1,720,333   | 1,790,880   | Dec. 70,547    | 3.9   |
| Net earnings.....          | \$1,280,468 | \$1,572,880 | Dec. \$292,412 | 18.6  |
| Gross earn. per mile.....  | 4,450       | 4,994       | Dec. 544       | 10.8  |
| Net ".....                 | 1,903       | 2,337       | Dec. 434       | 18.6  |
| Per cent. of expenses..... | 57.34       | 53.55       | Inc. 3.79      | 7.1   |

The business of the road has undoubtedly been affected injuriously by the opening of the Atchison, Topeka & Santa Fe and the resulting competition for Colorado traffic. The income account is as follows:

|                     |                |
|---------------------|----------------|
| Net earnings.....   | \$1,280,467 35 |
| Other receipts..... | 62,485 22      |
| Total.....          | \$1,342,952 57 |

Interest..... \$5,950 00

Taxes, State and other..... 114,109 24

Other payments..... 243,950 14

Balance..... \$978,943 19

Part of this apparent surplus is in earnings on Government business, which cannot be collected. No interest was paid on the funded debt except the small sum of \$5,950 as above. The road is now in the hands of receivers.

The figures for the controlled lines are as follows:

|                           | Junc. City & Fort Kearney. | Arkansas Valley. | Denver Pacific. | Denver & Boulder Valley. |
|---------------------------|----------------------------|------------------|-----------------|--------------------------|
| Miles of road.....        | 33                         | 76               | 106             | 27                       |
| Passengers carried.....   | 4,487                      | 2,633            | 21,718          | 8,506                    |
| Passenger mileage.....    | 127,903                    | 112,763          | 1,800,747       | 125,909                  |
| Tons freight carried..... | 33,789                     | 16,045           | 93,896          | 91,844                   |
| Tonnage mileage.....      | 1,071,833                  | 955,315          | 3,479,703       | 1,456,502                |
| Passenger earnings.....   | \$6,404 38                 | \$7,136 49       | \$134,816 25    | \$8,921 17               |
| Freight ".....            | \$2,614 76                 | \$3,701 71       | \$60,743 19     | \$6,923 68               |
| Other ".....              | \$3,933 76                 | \$6,332 33       | \$5,585 23      | \$2,963 88               |
| Total.....                | \$52,052 90                | \$57,770 53      | \$331,145 67    | \$68,408 73              |
| Expenses.....             | 24,354 65                  | 48,129 65        | 165,608 67      | 48,413 55                |
| Net earnings.....         | \$27,698 25                | \$9,640 88       | \$165,537 00    | \$19,995 18              |
| Other receipts.....       |                            |                  | 20,873 60       |                          |
| Total.....                | \$27,698 25                | \$9,640 88       | \$186,410 60    | \$19,995 18              |
| Taxes.....                | \$8,803 08                 | 7 10 48          | 14,078 34       | 4,087 22                 |
| Interest.....             | 78,919 03                  | 188,353 96       | 36,383 70       | 165 08                   |
| Other payments.....       | 189 54                     | 321 61           | 67,165 93       | 165 08                   |
| Total.....                | \$8,992 62                 | \$86,451 38      | \$209,598 23    | \$40,896 00              |

Surplus, or deficit..... \$18,705 63

Gross earnings per mile..... 1,577 36

Net earn. per mile..... 839 34

Per cent. of expenses..... 46.79

The aggregate loss on these lines was \$161,923.32, a sum which would reduce to \$817,019.87 the apparent surplus given above. As compared with 1875, the Junction City & Fort Kearney showed an increase of \$22,595, or 76.6 per cent., in gross and of \$13,293, or 92.3 per cent., in net earnings; the Arkansas Valley a decrease of \$34,140, or 37.1 per cent., in gross, and of \$48,939, or 82 per cent., in net earnings. The earnings of all these controlled lines are light and all of them show a deficit except the Junction City & Fort Kearney, which has, we believe, some bonded debt, although no interest payments are recorded.

#### The London General Omnibus Company

Among the papers in the report of the evidence given before the Parliamentary Committee on the Use of Mechanical Power on Street Railroads, is one giving statistics of the traffic and dividends of the London General Omnibus Company. Among other matters we learn from the table that in 1866 the company's vehicles ran 12,607,000 miles, while for 1876 the figures stand at only 11,807,000 miles, being a decrease of 800,000. But although there was a falling off in the miles run, the number of passengers carried in 1876 was 51,159,000 as against 44,362,000 in 1866; but the amount received per passenger last year was only 11 pence, while in 1866 it was 11½ pence. This is accounted for by the fact that, concurrently with the decrease in the miles run, there has been a large reduction in the fares. The dividends paid have, nevertheless, increased from 6½ to 11 per cent. The receipts for passenger traffic were \$2,638,027, and in addition they took in, according to the evidence of the General Manager, no less than \$500,000 for "horsing" street railway cars. The average fare per passenger was 2½ pence, and the working expenses 88.71 per cent. The number of horses employed was 7,888.

With respect to the increased dividend, the General Manager explained that much of it is due to the more advantageous prices at which supplies of provender had been obtained. They had abandoned the use of oats, and fed their horses entirely on maize, saving some hundreds of pounds per week by doing so. The company own 8,000 horses, the average life of which is 4½ years, although there are some which have been in the company's service for 16 or 17 years. Between 1,600 and 1,700 of those horses die or are sold every year, the average price for those sold being about \$49. It is a curious fact, according to the evidence of the General Manager, that neither the introduction of street railways nor the extension of the metropolitan railway system have had the slightest adverse effect on the omnibus traffic, which has increased by 12,000,000 since 1869. The cab traffic has also largely increased. In addition to the number of passengers carried in 1876 by the Omnibus Company, the three metropolitan street railway companies carried 48,000,000.



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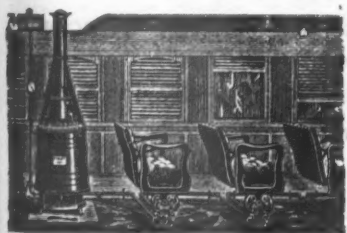
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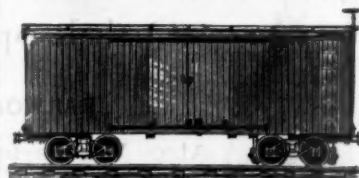
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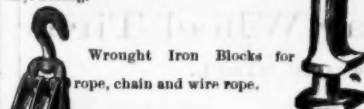
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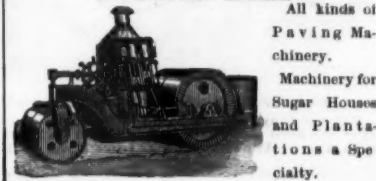
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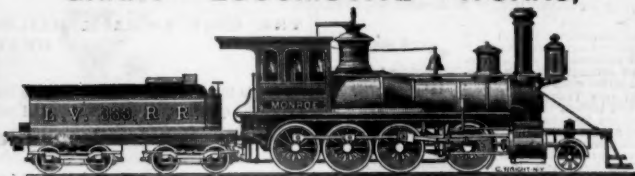
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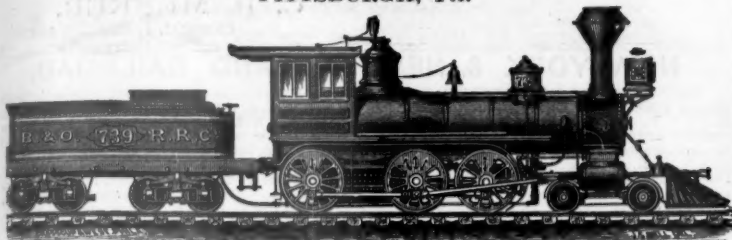


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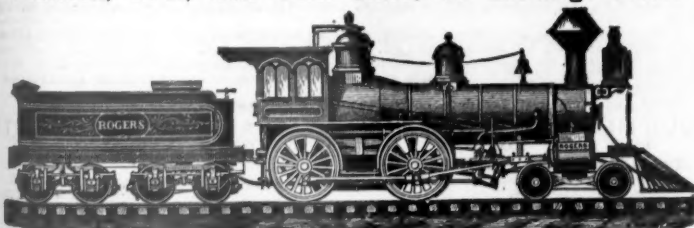
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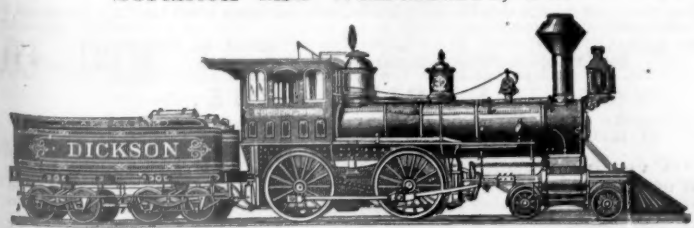
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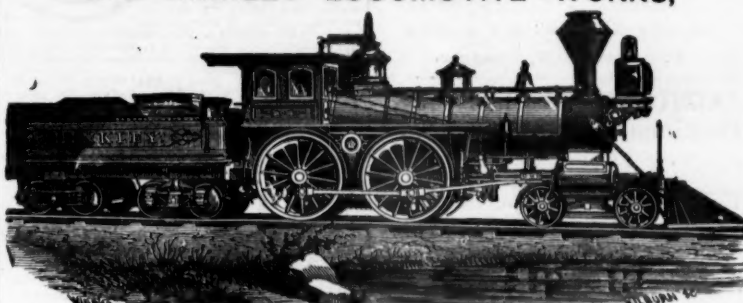
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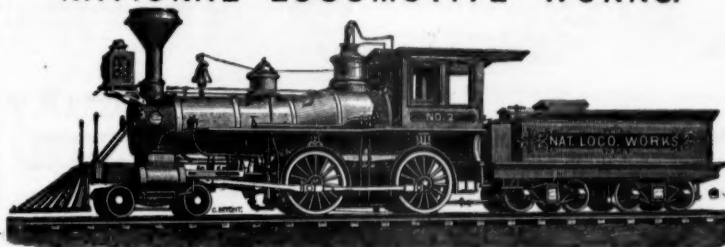
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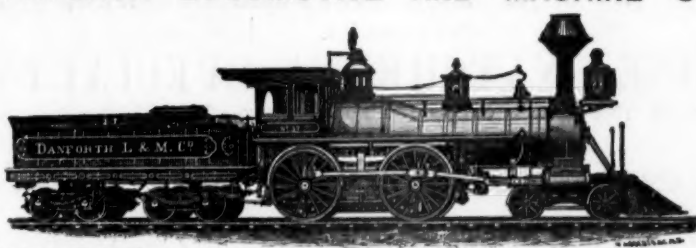
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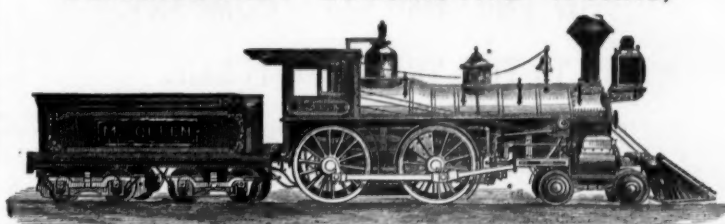
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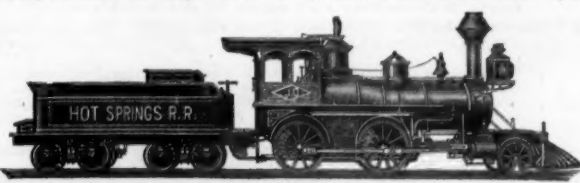
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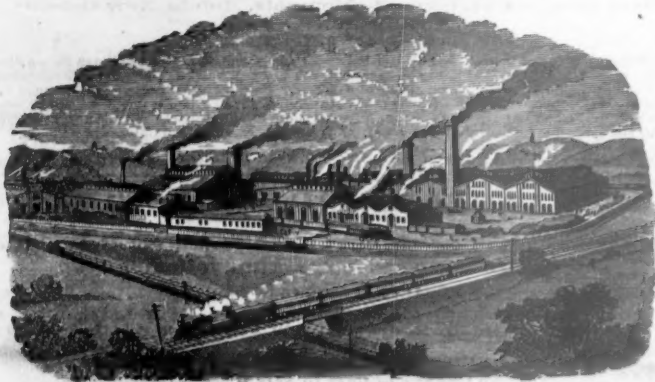


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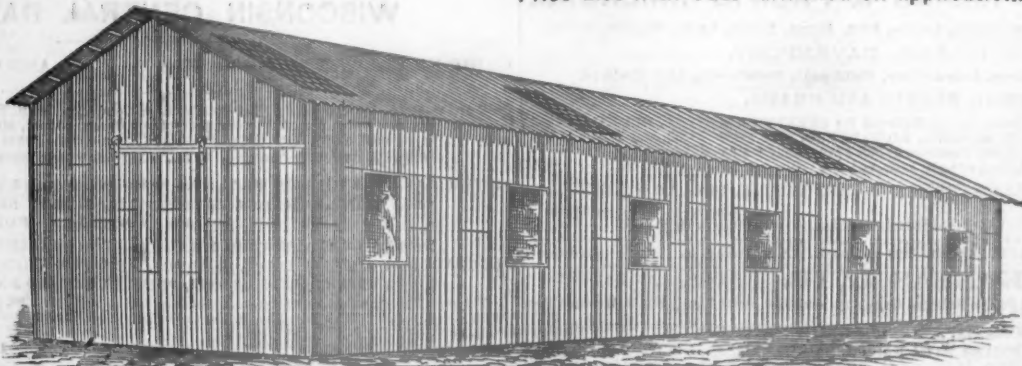
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